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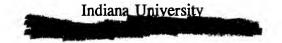
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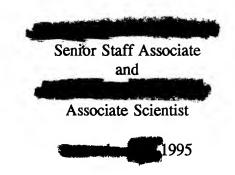
#### TRANSPORTATION RESEARCH CENTER



#### **ON-SITE AIR BAG INVESTIGATION**

CASE NO. - 95-17
FLEET - LEASED VEHICLE
LOCATION - TEXAS
ACCIDENT DATE 1995

#### Submitted By:



Contract Number: DTNH22-94-D-17058

#### Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
National Center for Statistics and Analysis
Washington, D.C. 20590

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

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On-site air hag denloyment ir	vestigation involving a 1994 Act	ıra Vigor GS, 4-door sedan, with active
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16. Abstract		
This report covers an on-site inv	estigation of an air bag deployment	crash that involved a 1994 Acura Vigor GS
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		ugh lanes, and one westbound left-turn lane).
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and a 1985 Ford LTD. The Vigor was traveling west in the inside, westbound, through lane on a five-lane, divided, U.S. trafficway (i.e., two eastbound and two westbound through lanes, and one westbound left-turn lane). The LTD was traveling south in the southbound lane of a two-lane, undivided city roadway. The front of the Vigor (case vehicle) impacted the left front and passenger sections of the LTD (vehicle #2) causing the case vehicle's driver side and right-front passenger side supplemental restraints (air bags) to deploy. The case vehicle rotated approximately 15 degrees counterclockwise after impact and came to rest approximately 5.5 meters (18 feet) west-southwest of impact heading west-southwest. Vehicle #2 rotated approximately 60 degrees counterclockwise after impact and came to rest approximately 9 meters (30 feet) southwest of impact heading east-southeast. The case vehicle's driver (46 year-old female) was also restrained by her available, active, three-point, lap and shoulder belt and sustained, according to her interview, minor injuries which included: small burns to her forearms and a cervical strain. The right front passenger in the case vehicle (27 year-old female) was not wearing her available, active, three-point, lap and shoulder belt and sustained, according to the case vehicle driver (and mother), minor injuries which included: a forehead abrasion and a laceration to a left finger. The right rear passenger in the case vehicle (78 year-old female) was also not wearing her available, active, three-point, lap and shoulder belt and sustained, according to the case vehicle driver, a minor injury to her right lower leg. Vehicle #2's driver (17 year-old female) was restrained by her available, active, three-point, lap and shoulder belt and sustained, according to the case vehicle driver, a minor injury to her right lower leg. Vehicle #2's driver (17 year-old female) was restrained by her available, active, three-point, lap and shoulder belt and sustained, according to her interview, a minor abr

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#### TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 95-17

# FLEET - LEASED VEHICLE LOCATION - TEXAS

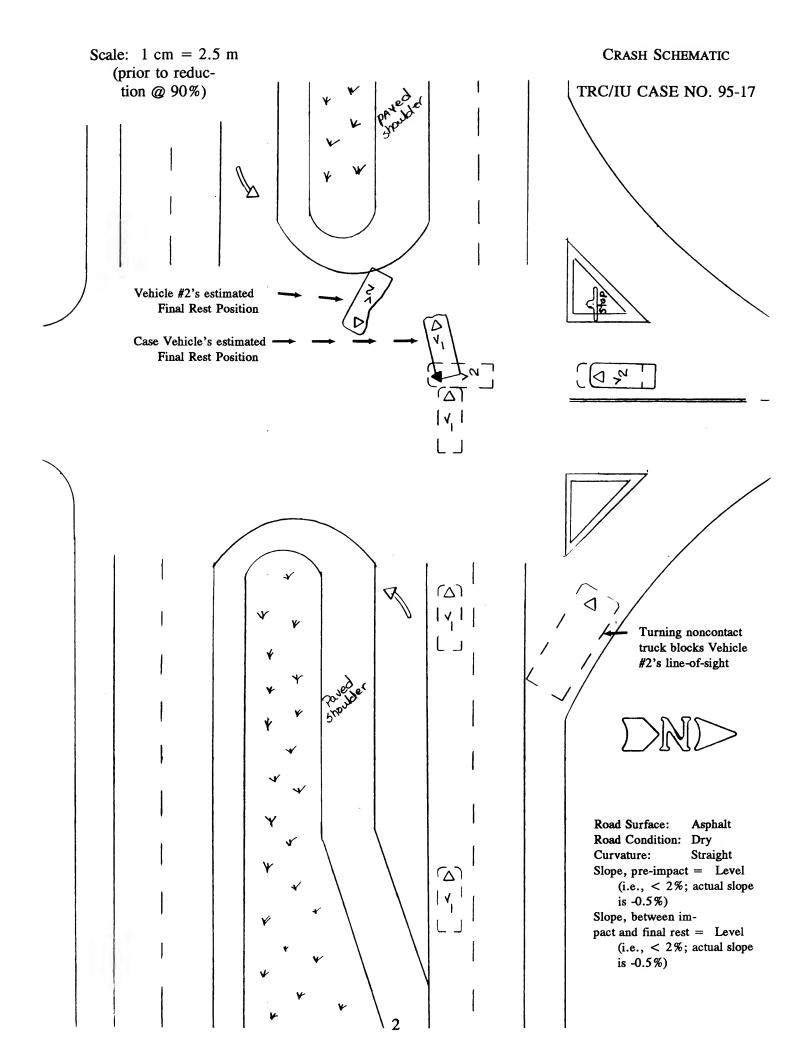
#### **SUMMARY**

This report concerns a motor vehicle crash involving an air bag equipped 1994 Acura Vigor GS, four-door sedan, and a 1985 Ford LTD, four-door sedan occurring on 1995 at 1995 at 1995 at 1995. Texas on a U.S. highway. This crash is of special interest because the case vehicle's right front passenger air bag was torn during its deployment.

The Vigor was traveling west in the inside, westbound, through lane on a five-lane, divided, U.S. trafficway (i.e., two eastbound and two westbound through lanes, and one westbound left-turn lane) when it impacted the LTD which was traveling south in the southbound lane of a two-lane, undivided city roadway. The case vehicle rotated approximately 15 degrees counterclockwise after impact and came to rest approximately 5.5 meters (18 feet) west-southwest of impact heading west-southwest. Vehicle #2 rotated approximately 60 degrees counterclockwise after impact and came to rest approximately 9 meters (30 feet) southwest of impact heading east-southeast.

The front of the Vigor impacted the left front and passenger sections of the LTD. CDCs were determined to be: 01-FDEW-1 for the Vigor and 10-LYEW-3 for the LTD. The CRASHPC reconstruction program, damage only algorithm, was used on the impact (highest severity) to the Vigor. The Total, Longitudinal, and Lateral Delta Vs are respectively: 24 k.p.h. (15 m.p.h.), -22 k.p.h. (-14 m.p.h.), and -8 k.p.h. (-5 m.p.h).

The 1994 Acura Vigor GS was equipped with both driver and right-front passenger supplemental restraint systems (air bags) which deployed as a result of the frontal impact. The driver of the vehicle (46 year-old female) was also restrained by her available, active, threepoint, lap and shoulder belt. She sustained, according to her interview, minor injuries which included: small burns to her forearms and a cervical strain. The driver of the Vigor was listed on the Police Accident Report as not sustaining any injury as a result of this crash. The right front passenger (27 year-old female) in the Vigor was not wearing her available, active, threepoint, lap and shoulder belt, sustaining a "B" (nonincapacitating-evident) injury. She sustained, according to the case vehicle driver (and mother), minor injuries which included: a forehead abrasion and a laceration to a left finger. The right rear passenger (78 year-old female) in the Vigor was also not wearing her available, active, three-point, lap and shoulder belt and was listed on the Police Accident Report as not sustaining any injury as a result of this crash. According to the case vehicle driver, she sustained a minor injury to her right lower leg. The driver (17 year-old female) of the LTD was restrained by her available, active, three-point, lap and shoulder belt and was listed on the Police Accident Report as not sustaining any injury as a result of this crash. According to her interview, she sustained a minor abrasion to her left thigh.



#### TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 95-17

#### FLEET - LEASED VEHICLE LOCATION < **TEXAS**

#### ACCIDENT DATA

Location/Street: U.S. Highway

County, Texas City/Township:

Area/Type: Urban, commercial

Accident Date/Time: 1995, @ \_\_\_\_\_p.m.

Investigating Police Agency: Police Department

Accident Type: Car / Car - right angle

Occupant Injury Severity (air bag vehicle): Abrasion forehead (AIS-1)

#### AMBIENT CONDITIONS

**Light Conditions: Daylight** 

Weather Condition: Clear (no clouds)

Precipitation: None

Road Surface: Dry

#### ROADWAY

Case Vehicle Location: U.S. highway City street

Two lanes, undivided Number of Travel Lanes: Five lanes, divided; two

lanes eastbound, three lanes westbound--two westbound through lanes and one left-turn lane

Vehicle #2

Width: 3.4 meters (11.2 feet) 5.7 meters (18.7 feet)

Surface Type: Asphalt Asphalt

Median: Grass median without None positive barrier

#### ROADWAY (CONTINUED)

Case Vehicle

Vehicle #2

Shoulders:

Asphalt shoulders on both north and south sides of

Concrete apron with curbs on north and south sides

westbound roadway

Vertical alignment:

Level

Level

Horizontal alignment:

Straight

Straight

Estimated Coefficient of

Friction:

.75

.75

Traffic Density:

Moderate

Light

#### TRAFFIC CONTROLS

#### Case Vehicle

Vehicle #2

Signals:

None

None

Signs:

None

Regulatory STOP sign

Markings:

Solid white edge line on north side, dash white lane line between outside and inside through lanes, double solid white lane lines between inside through lane and left-turn lane, and solid yellow center line on south side

Dashed white lane line between north and south lanes until near intersection; at intersection, double solid vellow center lines

Speed Limit:

64 k.p.h. (40 m.p.h.)

48 k.p.h. (30 m.p.h.)

#### VEHICLES

Case Vehicle

1994	1985
1フプサ	1703

Year:

Vehicle #2

Make:

Acura

Ford

Model:

Vigor GS

LTD

Body Type:

Four-door sedan; five

Four-door sedan; five

passengers

passengers

V.I.N.

JH4CC2664RC-----

1FABP393XFG-----

Color:

Black

Gray

	VEHICLES (CONTINUED)	
	Case Vehicle	Vehicle #2
Mileage:	22,925 km (14,245 miles)	Unknown, odometer may have rolled over; 52,943 km (32,897 miles
Engine:	2.5 liters, I5	3.8 liters, V6
Transmission:	4-speed automatic	Automatic, unknown speed
Steering:	Power-assisted, rack-and-pinion	Power-assisted, worm an gear
Brakes:	Power-assisted, 4-wheel disc	Power-assisted, 4-wheel drum
Padding:	Steering wheel and hub, sunvisors, dash, "A"-pillars, side door surfaces	Steering wheel, dash, survisors, A"-pillars, side door surfaces
Active Restraints:	3-point, manual, lap and shoulder belts in front and rear outboard seating positions; lap belt only at rear center position	3-point, manual, lap and shoulder belts in front outboard seating positions; lap belt only at reapositions
Passive Restraints:	Factory installed driver and right front passenger supplemental restraint systems (air bags)	None
Defects:	None	None
Fleet:	Leased vehicle	Private vehicle
Tow status:	Towed due to damage	Towed due to damage
	Vehicle Damage	

VEHICLE DAMAGE				
EXTERIOR	Case Vehicle	Vehicle #2		
Deployment Impact		,		
Event number:	First	First		
Object Struck:	Vehicle #2	Case Vehicle		
Damage location Damaged Plane: Vertical Location	Front	Left		
On Plane:	Bumper	Between sill and beltline		

V	EHICLE DAMAGE (CONTINUED)	
EXTERIOR (Continued)	Case Vehicle	Vehicle #2
Deployment Impact (Continued)		
Direct Begins:	9 cm ( 3.5 in) inward from left front	17 cm ( 6.7 in) behind left front axle
Length Direct: Field L: C <sub>1</sub> : C <sub>2</sub> : C <sub>3</sub> : C <sub>4</sub> : C <sub>5</sub> : C <sub>6</sub> : D: Maximum Crush: Location:	bumper corner  140 cm ( 55.1 in)  162 cm ( 63.8 in)  26 cm ( 10.2 in)  18 cm ( 7.1 in)  17 cm ( 6.7 in)  13 cm ( 5.1 in)  11 cm ( 4.3 in)  9 cm ( 3.5 in)  +7 cm ( +2.8 in)  26 cm ( 10.2 in)	215 cm ( 84.6 in) 252 cm ( 99.2 in) 0 cm ( 0.0 in) 10 cm ( 3.9 in) 35 cm ( 13.8 in) 36 cm ( 14.2 in) 19 cm ( 7.5 in) 0 cm ( 0.0 in) +6 cm ( +2.4 in) 36 cm ( 14.2 in)
CDC:	C <sub>1</sub>	C <sub>4</sub>
Damaged Components:	01-FDEW-1  Front bumper, grille, hood, left and right front fenders and headlight assemblies	10-LYEW-3  Left front fender, wheel rim, and door, left rear door, and left front head-light reflectors and turn signal
INTERIOR		
Damaged Components:	Windshield, holed	None
Other Evidence of Occupant Contact:	Left and right dash and right glove box door	None
Manual Restraint System Failures:	None	None
Seat Performance Failures:	None	None
REPAIR		
Cost Estimate:	Unknown	Totalled, Unknown

#### VEHICLE VELOCITY ESTIMATES<sup>1</sup>

Highest Delta "V"	Case Vehicle	Vehicle #2
Reconstruction Program:	CRASHPC and EDCRASH	CRASHPC and EDCRASH
Program Algorithm:	Damage only	Damage only
Travel Speed:1	52 k.p.h. ( 32 m.p.h.)	20 k.p.h. ( 12 m.p.h.)
Total Delta "V":	24 k.p.h. ( 15 m.p.h.)	28 k.p.h. ( 17 m.p.h.)
Longitudinal Delta "V":	-22 k.p.h. (-14 m.p.h.)	-10 k.p.h. ( -6 m.p.h.)
Lateral Delta "V":	-8 k.p.h. ( -5 m.p.h.)	+26 k.p.h. (+16 m.p.h.)

#### COLLISION SEQUENCE

#### PRE-CRASH:

According to the Police Accident Report and the case vehicle's driver, the case vehicle (Vigor) was traveling west in the inside, westbound, through lane on a five-lane, divided, U.S. trafficway (i.e., two eastbound and two westbound through lanes, and one westbound left-turn lane) and was attempting to continue in its direction of travel. According to the Police Accident Report and vehicle #2's driver, vehicle #2 (LTD) was traveling south in the southbound lane of a two-lane, undivided, city roadway and was stopped attempting to cross the westbound lanes of the divided trafficway. NOTE: Although the intersection has four legs, the southern leg is a commercial driveway. According to the driver of vehicle #2, she intended to continue straight across the eastbound roadway and enter the commercial driveway on the south leg. According to the Police Accident Report and the driver of vehicle #2, a noncontact vehicle was turning right from the westbound roadway intending to go north. According to the driver of vehicle #2, she entered the intersection and then saw the case vehicle approaching. According to the case vehicle's driver, she attempted to brake when she saw vehicle #2 stopped<sup>2</sup> in her path. The case vehicle continued essentially straight ahead prior to impact. According to the driver of vehicle #2, she attempted to accelerate<sup>2</sup>. Vehicle #2 surged essentially straight ahead prior to impact. The accident occurred in the westbound roadway in the tee intersection of the two trafficways.

#### CRASH:

According to the vehicle inspections, the front of the case vehicle impacted the left front and passenger sections of vehicle #2 causing the case vehicle's driver side and right-front passenger side supplemental restraint systems (air bags) to deploy. The case vehicle rotated approximately 15 degrees counterclockwise after impact and came to rest approximately 5.5 meters (18 feet) west-southwest

Vehicle travel speeds at impact are between: 48-56 k.p.h. (30-35 m.p.h.) for the case vehicle, and 16-24 k.p.h. (10-15 m.p.h.) for vehicle #2; see discussion on page 31, TRC Vector Analysis Iterations.

The exact actions of vehicle #2's driver are unknown, but it is entirely possible that she started, stopped, and finally attempted to accelerate across the westbound lanes. On the other hand, the perception by the case vehicle's driver that vehicle #2 stopped in her path may have resulted from her inattention. In either case, vehicle #2 was accelerating prior to impact; see discussion on page 31, TRC Vector Analysis Iterations.

#### COLLISION SEQUENCE (CONTINUED)

CRASH: (Continued)

of impact heading west-southwest. Vehicle #2 rotated approximately 60 degrees counterclockwise after impact and came to rest approximately 9 meters (30 feet) southwest of impact heading east-southeast.

#### **POST-CRASH:**

Occupants:

According to the driver of the case vehicle, she remained inside the vehicle at final rest. She was conscious and able to exit the case vehicle under her own power. According to the case vehicle driver, the right front and right rear passengers also remained inside the vehicle at final rest. They were both conscious. The right front passenger was able to exit the case vehicle with some assistance; the right rear passenger was able to exit the case vehicle under her own power. According to the case vehicle's driver, she was restrained by her available, active, three-point, lap and shoulder belt; the right front and right rear passengers were not wearing their available, active, three-point, lap and shoulder belt.

Police:

The investigating police agency was notified of the crash within four minutes and arrived on-scene within six minutes. Traffic control procedures were established and emergency medical and towing services were called to assist.

Rescue:

According to the Police Accident Report, both drivers and the right rear passenger in the case vehicle refused transportation for medical treatment. According to the case vehicle's driver, she did receive medical treatment later at a physician's office. According to the Police Accident Report and the case vehicle's driver, the right front passenger was transported by ambulance to a medical facility where she was treated and released. According to the case vehicle's driver, the right rear passenger was not treated. According to our interview with the case vehicle's driver (mother of right front passenger and daughter of right rear passenger), she sustained minor injuries which included: small burns to her forearms and a cervical strain. The right front passenger sustained minor injuries which included: a forehead abrasion and a laceration to a left finger. Finally, the right rear passenger sustained a minor injury to her right lower leg. According to the driver of vehicle #2, she was restrained by her available, active, three-point, lap and shoulder belt and sustained a minor abrasion to her left thigh.

Removal:

Following the police investigation, the case vehicle and vehicle #2 were towed from the scene.

#### HUMAN FACTORS/OCCUPANT DATA

DRIVERS: 46 year-old female 17 year-old female
Weight: 163 cm (64 in) 160 cm (63 in)

#### HUMAN FACTORS/OCCUPANT DATA (CONTINUED)

Case Vehicle Vehicle #2 DRIVERS: (Continued) 68 kg (150 lbs) 52 kg (115 lbs) Height: Student Occupation: Student Active Restraint 3-point lap and shoul-System/Usage: 3-point lap and shoulder/Used der/Used Usage Source: Vehicle inspection, In-Vehicle inspection, Interviewee, and Police terviewee, and Police Accident Report Accident Report Passive Restraint System/Usage: Factory installed air bag / None air bag deployed Usage Source: Vehicle inspection, In-Not applicable terviewee, and Police Accident Report Eye glasses/contacts: Sunglasses Contacts Vehicle Familiarity: Unknown mileage, driven 1,600 km (1,000 mi) tobetween 6-12 months tal; driven two months Route Familiarity: Infrequently (second time Daily ever) Trip Plan: Shopping to relative's Home to shopping house Manner of Leaving Scene: Taken by Police to hospi-Walked home tal Type of Medical Treatment: Treatment later Self Treatment Right Front Right Rear CASE VEHICLE PASSENGERS: 27 year-old female 78 year-old female Height: 168 cm (66 in) 157 cm (62 in) Weight: 77 kg (170 lbs) 59 kg (130 lbs) Active Restraint System/Usage: 3-point lap and shoul-3-point lap and shoulder/Not used der/Not used Usage Source: Vehicle inspection, In-Interviewee, Police Acciterviewee, Police Accident Report dent Report Passive Restraint System/Usage: Factory installed air bag / None

Air Bag Deployed

#### HUMAN FACTORS/OCCUPANT DATA (CONTINUED)

CASE VEHICLE PASSENGERS: <u>Case Vehicle</u> <u>Vehicle #2</u>

(Continued)

Usage Source: Vehicle inspection, In-

terviewee, Police Acci-

dent Report

Eye glasses/contacts: Sunglasses Not applicable

Manner of Leaving Scene: Ambulance Taken by Police to hospi-

tal

Not applicable

Type of Medical Treatment: Treated and released Not treated

Case Vehicle Driver Injuries <sup>3,4</sup>				
Description of Injury	<u>A.I.S.</u>	Source of Data	Injury <u>Mechanism</u>	<u>Certainty</u>
Burns, small, to both forearms	792000.1,3	74	Air bag driver's side exhaust gases	{Probable}
Cervical strain <sup>3</sup>	640278.1,6	74	Air bag driver's side	{Possible}

Case Vehicle Right Front Passenger Injuries <sup>3</sup>				
Description of Injury	<u>A.I.S.</u>	Source of Data	Injury <u>Mechanism</u>	Certainty
Abrasion forehead Laceration left finger, not further specified	190202.1,7 790600.1,2	7 <sup>4</sup> 7 <sup>4</sup>	Windshield Windshield	{Certain} {Probable}

Case Vehicle Right Rear Passenger Injuries				
Description of Injury	<b>A.I.S.</b>	Source of Data	Injury <u>Mechanism</u>	Certainty
Injured right calf	890099.1,1	7	Interior surface of right rear door	{Possible}

<sup>&</sup>lt;sup>3</sup> The case vehicle driver indicated that her doctor told her she had a strained vertebral ligament. Because of the lack of medical records, the injury description coded is a "best fit".

<sup>&</sup>lt;sup>4</sup> The husband of the case vehicle driver and father of the right front passenger did not provide the signed medical releases needed to acquire these occupants medical records.

Vehicle #2 Driver Injuries					
Description of Injury	<u>A.I.S.</u>	Source of Data	Injury <u>Mechanism</u>	<u>Certainty</u>	
Abrasion left thigh	890202.1,2	7	Steering wheel rim	{Probable}	

#### DRIVER KINEMATICS

According to the case vehicle's driver, her initial posture just prior to the impact was: sitting upright with her back against the seatback, either her left foot on the floor and her right foot on the brake or both feet on the brake, and both hands on the steering wheel. The vehicle inspection revealed the seat track was set all the way rearward with the seatback in the slightly reclined position. According to the case vehicle driver her seat track position normally is set midway between the forward and middle positions. It is most likely that the driver's seat was moved backwards during the removal of the driver and passenger air bags. According to the case vehicle's driver, she attempted to brake immediately prior to impact and most likely move forward toward the steering wheel.

Based on the interview with the case vehicle's driver and occupant kinematic principles, the case vehicle's impact sent her forward and most likely to the right causing her to load her available, active, three-point, lap and shoulder belt. The driver stated that her belts locked-up holding her back from absorbing the full force of her deploying air bag. The inspection of the driver's air bag revealed a lipstick mark.

Based on the driver's interview and the crash dynamics, the impact with vehicle #2 caused the front end of the case vehicle to rotate approximately 15 degrees counterclockwise. At final rest the case vehicle remained in the inside westbound lane heading west-southwest. According to the driver, at final rest, she was essentially in the same seating position as she was prior to the crash due to her usage of her lap and shoulder belt.

#### RIGHT FRONT PASSENGER KINEMATICS

According to the case vehicle's driver and mother of the right front passenger, her daughter's posture immediately prior to the crash was most likely: leaning forward with both feet on the floor and both hands on the dash in front of her bracing for the impending crash. The vehicle inspection showed that the position of the seat track was between the middle and rear positions with the seatback slightly reclined. The driver also confirmed that the seat was similarly positioned at the time of the crash.

Based on the interview with the case vehicle's driver and occupant kinematic principles, the case vehicle's impact with vehicle #2 caused the right front passenger to move forward, upward, and to her right. The vehicle inspection indicated that the right front passenger contacted and holed the windshield with her head causing, according to the interview with the case vehicle's driver, only a abrasion to her daughter's forehead and a laceration to her left finger. According to the interviewee and the Police Accident Report, the right front occupant was not wearing her available, active, three-point lap and shoulder restraint at the time of impact. The case vehicle's

#### RIGHT FRONT PASSENGER KINEMATICS (CONTINUED)

driver (mother) indicated that the sunglasses her daughter was wearing, were found on the roadway in front of the case vehicle at final rest. This passenger's right front air bag failed to fully because of an extensive tear the air bag sustained during the deployment. The tear to the air bag occurred during its deployment when the bag's material snagged the mounting screws on the inflator module; see SELECTED PHOTOGRAPHS #49 through #57. The air bag also sustained a few other cuts which were caused from the windshield glass.

Based on the crash dynamics, the right front passenger most likely rebounded rearward after striking the windshield. Her exact position at final rest is unknown, but the case vehicle driver indicated that she was able to exit the case vehicle with some assistance.

#### RIGHT REAR PASSENGER KINEMATICS

According to the case vehicle's driver and daughter of the rear seated passenger, her mother's posture immediately prior to the crash is not known for sure, but she was believed to be: sitting upright with both feet on the floor and both hands on the seat in front of her bracing for the impending crash. According to the case vehicle's driver, this occupant was seated behind the driver (i.e., position "21"); however, contact evidence observed during the vehicle inspection indicates that she was seated behind the right front passenger (i.e., position "23"). The vehicle inspection determined that the rear bench seat was fixed and not adjustable.

Based on the interview with the case vehicle's driver and occupant kinematic principles, the case vehicle's impact with vehicle #2 caused the driver's mother to move forward and to her right contacting the back of the right front seatback with her knees. According to the case vehicle's driver, her mother sustained only an injury to her right lower leg (calf), most likely from contacting the right rear door's interior surface.

According to the driver, her mother was thrown across the rear seat and ended up on the right side at final rest laying on her side. This reported posture at final rest is not inconsistent with this contractor's believed seating location. According to the driver the rear passenger was not wearing her available, active, three-point lap and shoulder belt. According to the Police Accident Report, the rear seated passenger was wearing only the lap portion of her lap and shoulder belt.

AIR BAG SYSTEM	
Driver Air Bag	PASSENGER AIR BAG
63 cm (24.8 in) longitudinally; 67 cm (26.4 in) vertically	60 cm (23.6 in) longitudinally
Two	Two
3 cm (1.2 in)	9 cm (3.5 in)
	Driver Air Bag  63 cm (24.8 in) longitudinally; 67 cm (26.4 in) vertically  Two

#### AIR BAG SYSTEM (CONTINUED)

DRIVER AIR BAG

PASSENGER AIR BAG

Vent Hole Clock Positions:

One and eleven o'clock

Three and nine o'clock

Generant Residue:

No unusual amount found

No unusual amount found

#### Discussion

Although the exact nature and extent of the injuries sustained by the case vehicle's right front passenger are unknown, it does not appear that she was severely injured during this crash. If her right front air bag had properly deployed, given her position on top of the air bag module because of the nonuse of her available restraints, then it is most likely that she would have been severely injured by her deploying right front air bag.

# ACCIDENT COLLISION MEASUREMENT TABLE

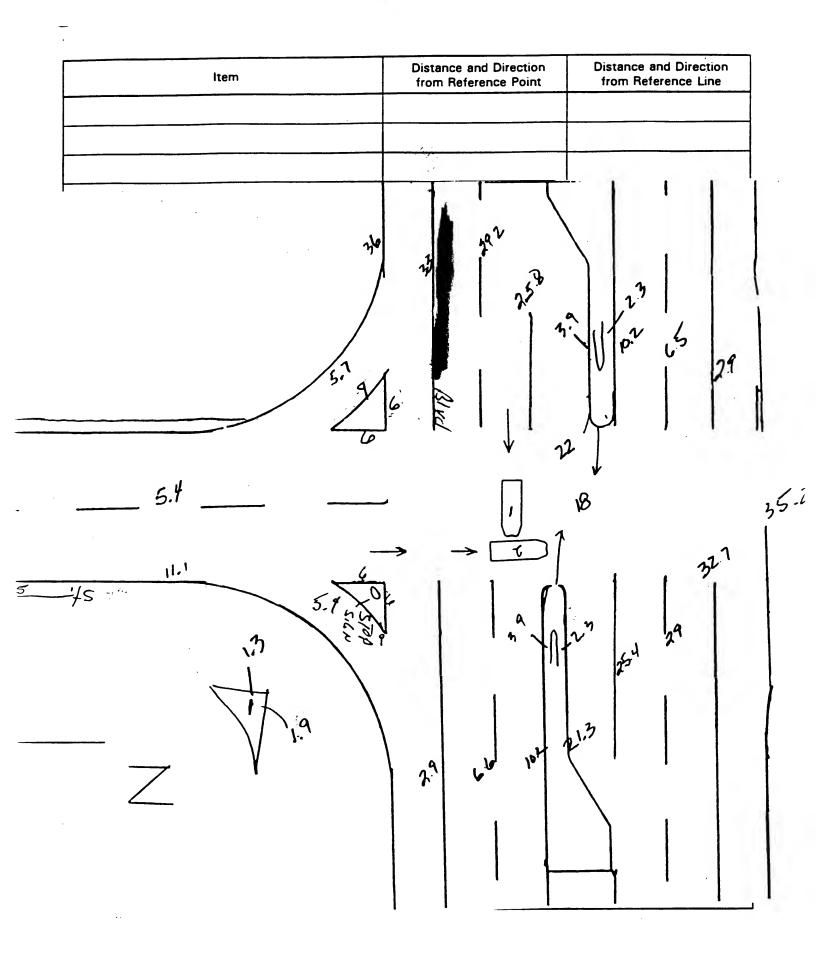


U.S. Department of Transportation National Highway Traffic Safety Administration

# ACCIDENT COLLISION MEASUREMENT TABLE

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

Primary Sampling Unit Number 10 Case Number - Stratum 9517					
	Document vehicle  referance point to physical fear  scaled docume induced physical  scaled docume objects contact  scaled rapreser pra-impact, impupon either:  a) physical of	e dynamics including:  and reference line relative turas presant at the scane intation of all accident al evidence intation of all roadside	Heading Surface Surface Condition Coefficial Friction Grade (v/ Measurer (between and final	CRASH DATA  VEH. #1 VEH. #2 VEH. #3  Angle 180 84  Type Asphalt  DR:Y DRY  Int of  Th) -1/4/48  Timpact	
			Grade (v/ Measurar (at location rollovar in	ment on of	
Reference Point:		Reference line:			
Item		Distance and Director from Reference P		Distance and Direction from Reference Line	
NO EVIDENCE					
	·				



Appendix A:

POLICE ACCIDENT REPORT

TEXAS PEACE DEFICER'S ACCIDENT REPORT ST-3 (EII. 9/2/93)	MAIL TO: STATISTICAL SERVICES, TEXAS DEPARTMENT OF PUBLIC SAFETY.	X-
PLACE WHERE ACCIDENT DCCURRED COUNTY	CITY DR TOWN	LOC. NO
IF ACCIDENT WAS DUTSIDE CITY LIMITS. INDICATE DISTANCE FROM NEAREST TOWN MILE	SHOW ONLY IF INSIDE CITY LIMITS	DD NOT WRITE IN THIS SPACE
ROAD DN WHICH ACCIDENT OCCURRED INTERSECTING STREET OR RR X'ING NUMBER  REDCK NUMBER STREET OR ROAD NAME	CONSTR. TYES SPEED HO CONSTR. TYES SPEED HO CONSTR. TYES SPEED AND LIMIT HO CONSTR. TYES SPEED ZONE NO LIMIT 30	LOC CODE SEVERITY
NOT AT INTERSECTION FT	F SHOW MILEPOST OR HEAREST INTERSECTING NUMBERED HIGHWAY IF MOME SHOW MEAREST INTERSECTING STREET OR REFERENCE POINT	FAT. REC DR. REC
DATE OF ACCIDENT 19 25 DAY OF WEEK	HDUR A.M. IF EXACTLY NOON P.M. OR MIDNIGHT, SO STATE	TE
UNIT NO. 1 - MOTOR VEHICLE YEH IDEN		TLE = VAN OR BUS. ATING CAPACITY
YEAR 1994 COLOR BLAGE HOULA MODEL FOR ORIVER'S	PHONE	TEAL STATE PRINTERS
DRIVER'S LICENSE STATE NUMBER CLASS.TYPE	DB RACE SEX F DCCUPATION STATE	udent
SPECIMEN TAKEN (ALCOHOL/DRUG ANALYSIS)  1-BREATH 2-BLOOD 3-OTHER 4-NONE 5-REFUSED 4	DL/DRUG ANALYSIS RESULT PEACE DFFICER, EMI	
DWNER X  LIABILITY XYES  LIABLE THE REST SHOW TESSEE TO LEASE D. OTHERWISE SHOW SWILLE	OI OI	7×, state
INSURANCE . NO		IAMAGE RATING FO-3
	T ND 1 P A B 1 3 1 3 X F G	'LE = VAN OR BUS. ATING CAPACITY
MODEL 1985 COLOR GRAY FOR MODEL NAME	PHONE NUMBER	
SPECIMEN TAKEN (ALCOHOL/DRUG ANALYSIS) 1-BREATH 2-BLODD 3-OTHER 4-NDNE 5-REFUSED 4	DR RACE W SEX P DCCUPATION STO	S DRIVER,
CESSEE OWNER X	ADDRES? CIT	3 LAT 2
INSURANCE ND TAME	POLICY NUMBER VEHICLE D	AMAGE RATING LP. 3
DAMAGE TO PROPERTY DTHER THAN VEHICLES		s
UGHT WEATHER SURFAC	CE TYPE RDAD DESCRIBE RDAD CONDITIONS	JAMAGE ESTIMATE (INVESTIGATOR'S OPINION)
1-DAYLIGHT 1-CLEAR/CLOUDY 6-SMDKE 1-DRY 2-DAWN 2-RAINING 7-SLEETING 2-WET 3-DARK-NDT LIGHTED 3-SNDWING 8-HIGH WINDS 3-MUDI	1-BLACKTOP 2-CONCRETE 3-GRAVEL DY 4-SHELL NY/ICY 5-DIRT	
IN YOUR OPINION. OID THIS ACCIDENT RESULT IN AT LEA	AST S500.00 DAMAGE TO ANY ONE PERSON'S PROPERTY?	∠yes no
NAMENONE		CITATION LUMBER
NAME	CHARGE N	ITATION IUMBER
	Dispatched TIME ARRIVED AT SCENE DE ACCIDENT	95 P M
SIGNATURE OF INVESTIGATOR	DATE REPORT MAD S IS	PEPDRT COMPLETE XYES NO

					1						ī						
EJECTE	ю	CODE FO	R TYPE RESTRAINT	USED	AIRBAG COD	E	HELMET US	iE .	CODE FOR INJURY	SEVERITY	ICO	ALC BPLETE IF		DRUG LINES NOT			(BLJOW
A - NOT APPL Y - YES N - NO P - PARTIALLY U - UNK		B - SEATBEL C - CHILO R	T & SHOULDER ST T & ND SHOULDER ESTRAINT ER STRAP DNLY		Y - DEPLOYED N - NO DEPLOYM U - UNK IF DEPLO	ENT 2 - 1	WORN-DAMAGED WORN-NOT CAM WORN-UNK IF O NOT WORN UNK IF WORN	AGEO DAMAGEO	K - KILLED A - INCAPACITATING B - NON INCAPACITA C - POSSIBLE INJUI N - NOT INJURED	ATING	3 4	- BREATI - BLOOD - OTHER - NONE - REFUS					
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UMIT 2				\	UNIT 2			O TO TIELD ROW -	- Tuknima iser		PARKED W	********	EHTE				
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PLACE WHERE		XAS DEPARTMENT OF PUBLIC SAFETY, AND	TX
ACCIDENT OCCURRED COUNTY	CITY OR TOWN		LOC. NO.
IF ACCIDENT WAS DUTSIDE CITY LIMITS, INDICATE DISTANCE FROM HEAREST TOWN		CITA ON LOWIN	00 NOT WRITE IN THIS SPAC
ROAD ON WHICH ACCIDENT OCCURRED INTERSECTING STREET OR RR X'IND NUMBER	ST. STREET ON ROAD NAME AGUIT MUMBER ON ETREET COSE	CONSTR. EJ YES SPEED 40 ZONE 54 NO LIMIT CONSTR. [] YES SPEED 30 ZONE 54 NO LIMIT	LOC SEVERITY
NOT AT INTERSECTION	STATES ON ROAD NAME AQUIE NUMBER ON STREET CODE      FT.               OF      MI. N S E W W NOME, SHOW HEAREST INTERSECTING NUMBER OF STREET OF		TYPE
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CHARGES FILED  NAME	CHARGE	CITAT	
NAME	CHARGE	NUMI CITAT	ION
TIME NOTIFIED OF ACCIDENT	PM HOW DISPATORED	TIME ARRIVED AT	_
TYPED OR PRINTED NAME OF INVESTIGATOR SIGNATURE OF INVESTIGATOR	NOON	E REPORT MADE IS REPO	IRT COMPLETE (X YES 1 I NO

# Appendix B:

#### RECONSTRUCTION PROGRAM RESULTS:

CRASHPC (DAMAGE ONLY ALGORITHM)

CRASHPC (BARRIER OPTION--CASE VEHICLE AND VEHICLE #2)

EDCRASH (DAMAGE ONLY ALGORITHM)

TRC VECTOR ANALYSIS ITERATIONS

## **CRASHPC**

(DAMAGE ONLY ALGORITHM)



U.S. Department of Transportation

## CRASHPC PROGRAM SUMMARY

ŧ	<b>National</b>	Highway	Traffic	Safety
	A dominio	tion		

(All Measurements In Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM

Administration		*		CRASHWURTHINES:	S DATA SYSTEM
Identifying Title			1		
/ 0	95/1	$\mathcal{O}$	/		
Primary	Case NoStratum	Accident	Event D	ate (Month, day, year) of Ru	n
Sampling Unit		Sequenc	e No.		
CRASHPC Vehicle Id	lentification	1	1.1		<b>-</b> ,
Vehicle 1	1994	HCURA	V 1 G	-OR GS	_ CV
Vehicle 2	1985	FORD	1	TD	VZ
	Year	Make		Model	NASS
				,	Veh. No.
	GEN	IERAL INFOR	MATION		
	VEHICLE I			VEHICLE 2	
Size		Siz	е		3
Weight		We	eight		
1485+204+	11=170	O kg /3	74+ 52+	7 = 143	3 kg
Curb Occupant(s)	Cargo		urb Occupant(s)	Cargo	
CDC	OIFDEU	)/ cd	C ,	IOLYE	$\omega$ 3
PDOF (-180 to +180		O ° PD	OF (-180 to +18	0) = = = = = = = = = = = = = = = = = = =	700
Stiffness			ffness		- 3
• · · · · · · · · · · · · · · · · · · ·			1111033		
	SC	ENE INFORM	ATION		
Para di Para					
Rest and Impact Posi	**************************************	amage Informatio	******************************		
'	VEHICLE 1			VEHICLE 2	1
Rest	Χ .	m Res	• <b>†</b>	X	
Position	^·	Pos	sition		- · m
		m		Y	-·m
	PSI	· <del></del>		PSI	°
Impact	Χ .	m lmr	pact	X	. m
Position	Υ	Pos	sition	Y	
	··	m		·	-·— m
011- 41-4-400	PSI			PSI	
Slip Angle(-180 to +			Angle (-180 to	+ 180)	°
	'	VEHICLE MOT	rion		
Sustained Contact [	1No   1Yes	<u> </u>		•	
······································	/EHICLE 1		,	VEHICLE 2	
	, LINOLL 1			VEHICLE 2	
/ehicle Rotation	[ ] No [	l Yes Vet	nicle Rotation	[ ] No	[ ] Yes
Rotation Stop Bet	fore Rest [ ] No [	l Yes	Rotation Stop Be	fore Rest [ ] No	[ ] Yes
End of Rotation Position	x	m	End of Rotation rosition	х	_ · m
	Υ	m		Υ	m
	PSI	0		PSI	
Curved Path	7 N	1877	i b a		
in the world national accompanies to the building of the	[ ] No [	res Cur	ved Path	[ ] No	[ ] Yes
Point on Path X	m V	_	Point on Path	- V	
×	_ m Y	m	×	m Y	_ · m
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National Accident Sampling System-Crashworthiness Data System: CRASHPC Program Summary

FRICTION INFORMATION	TRAJECTORY INFORMATION
Coefficient of Friction .	Trajectory Data [ ] No [ ] Yes
Rolling Resistance Option	If No. Go To Damage Information
	Vehicle 1 Steer Angles
Vehicle 1 Rolling Resistance	LF ° RF °
LF RF	
LR RR	
_	Vehicle 2 Steer Angles
- Vehicle 2 Rolling Resistance	LF • RF •
LF RF	
LR RR	
	Terrain Boundary [ ] No [ ] Yes
	First Point
	Xm Ym
	Second Point
	Xm Ym
	Secondary Coefficient of Friction
	NEO DIVATION
DAWAGE	INFORMATION
VEHICLE 1	VEHICLE 2
Damage Length L 162 cm	Damage Length L <u>2 5 2</u> cm
Crush Depths C <sub>1</sub> 2 6 cm	Crush Depths C <sub>1</sub> cm
C <sub>2</sub>	C <sub>2</sub> / O cm
$C_3  \underline{\hspace{1cm}}	
C/_3_cm	C, 36 cm
C <sub>5</sub> /_cm	$C_6 = 19$ cm
C <sub>6</sub>	C <sub>6</sub> cm
Damage Offset D T cm	Damage Offset D 🗗 💪 cm
IF THIS COMMON IMPACT WAS WITH A MOTOR VEH	
IF THIS COMMON IMPACT WAS WITH A MOTOR VEH	CLE NOT IN TRANSPORT, FILL IN THE INFORMATION BELOW.
Model Year:	The Weight, CDC, Scene Data and Damage Information
Make:	for this vehicle should be recorded above.
Model:	
VIN:	
Complete and ATTACH the appropriate ve	hicle damage sketch and dimensions to the Form.

# SUMMARY OF CRASHPC RESULTS USING DAMAGE

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#### Special Crash Investigations; TRC/IU Case 95-17, Task 9526

# SPEED CHANGE (DAMAGE)

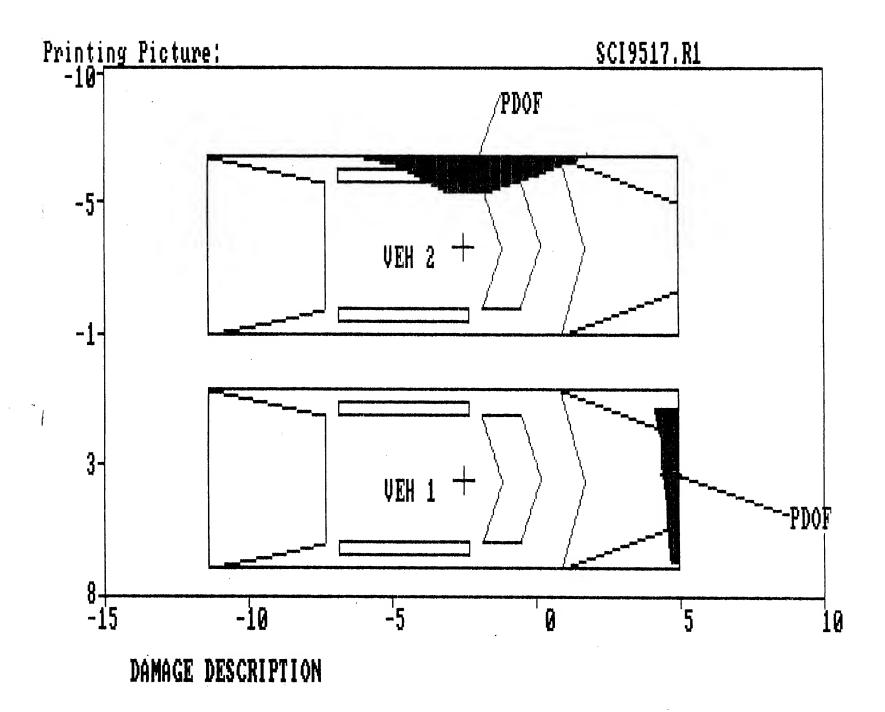
	(
VEHICLE #1	
TOTAL	24 KPH ( 15 MPH)
LONGITUDINAL	-22 KPH ( -14 MPH)
LATITUDINAL	-8 KPH ( -5 MPH)
PDOF ANGLE	20 DEGREES
ENERGY DISSIPATED =	39487 JOULES ( 29120 FT-LB)
VEHICLE #2	
TOTAL	28 KPH ( 17 MPH)
LONGITUDINAL	-10 KPH ( -6 MPH)
LATITUDINAL	26 KPH ( 16 MPH)
PDOF ANGLE	-70 DEGREES
ENERGY DISSIPATED =	51594 JOULES ( 38049 FT-LB)

# DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY	3 9	3 3
STIFFNESS CATEGORY VEHICLE WEIGHT	1700 KGS ( 3748 LBS)	1433 KGS ( 3159 LBS)
CDC	01FDEW1	10LYEW3
PDOF ANGLE	20 DEGREES	-70 DEGREES
CRUSH LENGTH	162 CM. ( 64 IN.)	252 CM. ( 99 IN.)
C1	26 CM. ( 10 IN.)	0 CM. ( 0 IN.)
C2	18 CM. ( 7 IN.)	10 CM. ( 4 IN.)
C3	17 CM. ( 7 IN.)	35 CM. ( 14 IN.)
C4	13 CM. ( 5 IN.)	36 CM. ( 14 IN.)
C5	11 CM. ( 4 IN.)	19 CM. ( 7 IN.)
C6	9 CM. ( 4 IN.)	0 CM. ( 0 IN.)
D	7 CM. ( 3 IN.)	6 CM. ( 2 IN.)
D'	-6 CM. ( -2 IN.)	13 CM. ( 5 IN.)
		(* INDICATES DEFAULT VALUE)

# DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	130 CM. ( 51 IN.)	130 CM. ( 51 IN.)
CG TO REAR AXLE	141 CM. ( 56 IN.)	141 CM. ( 56 IN.)
TRACK	150 CM. ( 59 IN.)	150 CM. ( 59 IN.)
CG TO FRONT OF VEH	228 CM. ( 90 IN.)	228 CM. ( 90 IN.)
CG TO REAR OF VEH	-270 CM. (-106 IN.)	-270 CM. (-106 IN.)
CG TO SIDE OF VEH	92 CM. ( 36 IN.)	92 CM. ( 36 IN.)
MOMENT OF INERTIA	14693 KGS ( 32391 LBS)	12385 KGS ( 27304 LBS)
VEHICLE MASS	4 KGS ( 10 LBS)	4 KGS ( 8 LBS)



# **CRASHPC**

(BARRIER OPTION--CASE VEHICLE AND VEHICLE #2)



U.S. Department of Transportation  National Highway Traffic Safety  Administration		SHPC PROGRAM SUMMA (All Measurements in Metric)		NATIONAL ACCIDE	ARY  NATIONAL ACCIDENT SAMPLING SYST  CRASHWORTHINESS DATA SYST	
Identifying Title  Primary Sampling Unit	95/ Case NoStratu		O / cident Event quence No.	Date (Month, day, year	) of Run	
CRASHPC Vehic Vehicle 1 Vehicle 2	le Identification 1994 1985 Year	ACURA FORD Make		JIGOR G5 ATD Model	CV V2 NASS Ven. No.	
	VEHICLE I	GENERAL INF	ORMATIO	VEHICLE 2		
Size		3	Size			
Weight  1485+ Curb Occupant	$\frac{1}{(s)} + \frac{1}{Cargo} = \frac{1}{7} \cdot \frac{7}{7}$	00 kg EW/	Weight  Curb Occu	+= upant(s)	kg	
PDOF (-180 to + Stiffness		20.	PDOF (-180 Stiffness	to +180) +	°	
		SCENE INFO	RMATION			
Rest and Impact	Positions (X) No. Go VEHICLE 1	To Damage Infon	mation [ ] '	Yes VEHICLE 2		
Rest Position	x	m	Rest Position	x	m	
rosition	Υ	m	rosition	Υ	m	
	PSI	· · · · · · · · · · · · · · · · · · ·		PSI _	°	
Impact Position	x	m	impact Position	x	m	
. 55111011	Υ	m	Position	Υ	m	
	PSI	· · · ·		PSI _	<u> </u>	
Slip Angle(-180 to	o +180)	- <u></u> °	Slip Angle (-1	180 to +180)	0	

# Sustained Contact [ ] No [ ] Yes VEHICLE 1 VEHICLE 2

Vehicle Rotation		INO I	l Yes	Vehicle Rotation		[ ] No	[ ] Yes
Rotation Stop Be	fore Rest [	] No [	] Yes	Rotation Stop Be	fore Rest	. [ , ] No	[ ] Yes
End of Rotation Position	х		m	End of Rotation	. X _		m
	Υ		rosition	rosition	Υ		m
	PSI		· •		PSI		°
Curved Path	1	No [	] Yes	Curved Path		[ ]No	[ ] Yes
Point on Path				Point on Path			
x · _	m Y _		m	×	m	Y	m
Rotation Direction	[ ] None [	I CW [	CCW	Rotation Direction	[ ] None	[ ] CW	] CCW
Rotation >360°	[ ] No [	] Yes		Rotation >360°	[ ] No	[ ] Yes	

VEHICLE MOTION

National Accident Sampling System-Crashworthiness Data System: CRASHPC Program Summary

FRICTION INFORMATION	TRAJECTORY INFORMATION
Coefficient of Friction	Trajectory Data [ ] No [ ] Yes
Rolling Resistance Option	If No. Go To Damage Information
Troiling resistance option	Vehicle 1 Steer Angles
Vehicle 1 Rolling Resistance	LF ° RF °
LF RF	LR RR RR
LR RR	
	Vehicle 2 Steer Angles
Vehicle 2 Rolling Resistance	LF • RF •
LF RF	LR ° RR °
LR RR	
	Terrain Boundary [ ] No [ ] Yes
	First Point
	X m Y m
	Second Point
	Xm Ym
,	Secondary Coefficient of Friction .
	·
DAMAGE IN	FORMATION
VEHICLE 1	VEHICLE 2
Damage Length L 162 cm	Damage Length L cm
Crush Depths C <sub>1</sub> 2 6 cm	Crush Depths C <sub>1</sub> cm
C <sub>2</sub>	C <sub>2</sub> cm
C <sub>3</sub>	C <sub>3</sub> cm
C₄ <u>/ 3</u> .cm	C <sub>4</sub> cm
C <sub>5</sub>	C <sub>5</sub> cm
C <sub>6</sub>	C <sub>6</sub> cm
Damage Offset D 🕀 7 cm	
Damage Offset D —	Damage Offset D = cm
IF THIS COMMON IMPACT WAS WITH A MOTOR VEHICLE	NOT IN TRANSPORT, FILL IN THE INFORMATION BELOW.
Model Year:	The Weight, CDC, Scene Data and Damage Information
Make:	for this vehicle should be recorded above.
	tor this verileic chedia so recorded accive.
Model:	
Model:	
Model:	e damage sketch and dimensions to the Form.

## SUMMARY OF CRASHPC RESULTS USING DAMAGE

\_\_\_\_\_

#### Special Crash Investigations; TRC/IU Case 95-17, Task 9526

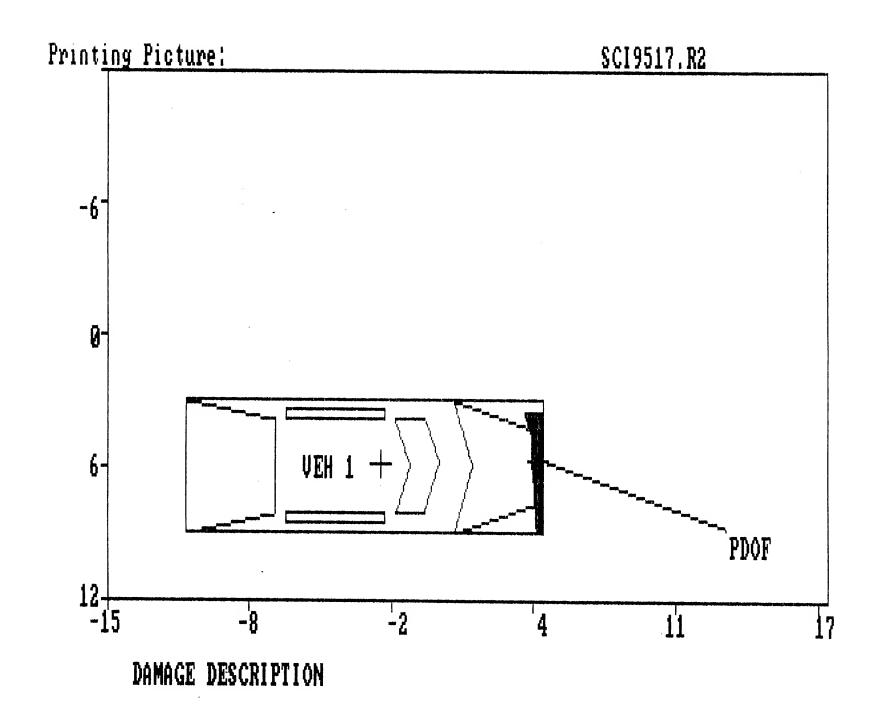
	SPEED CHANGE (DAMAGE)			
VEHICLE #1				
TOTAL	21 KPH ( 13 MPH)			
LONGITUDINAL	-20 KPH ( -13 MPH)			
LATITUDINAL	-7 KPH ( -5 MPH)			
PDOF ANGLE	20 DEGREES			
ENERGY DISSIPATED =	39487 JOULES ( 29120 FT-LB)			
VEHICLE #2				
TOTAL	0 KPH ( 0 MPH)			
LONGITUDINAL	0 KPH ( 0 MPH)			
LATITUDINAL	0 KPH ( 0 MPH)			
PDOF ANGLE	0 DEGREES			
ENERGY DISSIPATED =	0 JOULES ( 0 FT-LB)			

# DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY STIFFNESS CATEGORY	3 9	11 0
VEHICLE WEIGHT CDC	1700 KGS ( 3748 LBS) 01FDEW1	***** KGS (2204586 LBS) * BARRIER
PDOF ANGLE	20 DEGREES	0 DEGREES *
CRUSH LENGTH	162 CM. ( 64 IN.) 26 CM. ( 10 IN.)	0 CM. ( 0 IN.) * 0 CM. ( 0 IN.) *
C2	18 CM. ( 7 IN.)	0 CM. ( 0 IN.) *
C3 C4	17 CM. ( 7 IN.) 13 CM. ( 5 IN.)	0 CM. ( 0 IN.) * 0 CM. ( 0 IN.) *
C5	11 CM. ( 4 IN.)	0 CM. ( 0 IN.) *
C6 D	9 CM. ( 4 IN.) 7 CM. ( 3 IN.)	0 CM. ( 0 IN.) * 0 CM. ( 0 IN.) *
D'	-6 CM. ( -2 IN.)	0 CM. ( 0 IN.) *
		(* INDICATES DEFAULT VALUE)

### DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2		
CG TO FRONT AXLE	130 CM. ( 51 IN.)	127 CM. ( 50 IN.)		
CG TO REAR AXLE	141 CM. ( 56 IN.)	127 CM. ( 50 IN.)		
TRACK	150 CM. ( 59 IN.)	127 CM. ( 50 IN.)		
CG TO FRONT OF VEH	228 CM. ( 90 IN.)	127 CM. ( 50 IN.)		
CG TO REAR OF VEH	-270 CM. (-106 IN.)	-127 CM. ( -50 IN.)		
CG TO SIDE OF VEH	92 CM. ( 36 IN.)	127 CM. ( 50 IN.)		
MOMENT OF INERTIA	14693 KGS ( 32391 LBS)	***** KGS (***** LBS)		
VEHICLE MASS	4 KGS ( 10 LBS)	2600 KGS ( 5732 LBS)		





U.S. Department of Transportation

## CRASHPC PROGRAM SUMMARY

National	Highway	Traffic	Safety
Administ	retion		

(All Measurements In Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM

Administration					CRASHWURTHINE	SS DATA SYSTE
Identifying Title		_				
10	9517	7	01			
Primary	Case NoStratum		ccident Event	Date (Monti	h, day, year) of R	lun
Sampling Unit		•	Sequence No.			
CRASHPC Vehicle I	dentification	^		1/	_	
Vehicle 1	1994	ACUR	A	VIGOR E	55	CV
Vehicle 2	1985	FORN		LTD		VZ
	Year	Make	<del></del>	Model	1/11	NASS
					,	Veh. No.
	G	ENERAL IN	<b>JFORMAT</b>	ION		
	VEHICLE I			VEHICL	.E 2	
Size		//	Size			3
Weight			Weight			
	=	kg	1274	50.7	14:	7.3.
Curb Occupant(s)	Cargo	^9	Curb	Occupant(s) Cargo	/	2 <u>2</u> kg
CDC			CDC	10	$\lambda \gamma \epsilon$	- W3
PDOF (-180 to +18	0) +	•		180 to + 180)		700
Stiffness					<u> </u>	<del></del>
Sumess			Stiffness	;		3
		CENE INF	ORMATIC	MC		
_						
Rest and Impact Pos		Damage Infi	o <b>rmation</b> (	] Yes		
	VEHICLE 1			VEHICLI	E 2	
Rest	X		D 4	V		
Position		- · — m	Rest Position	X		· m
	Υ	_ · m		Y		· m
	PSI	°		PSI		· · · · · ·
Impact	X	D)	impact	X		
Position	^	_ · nı	impact Position			— · —— m
	<del></del>	_ · m		Y		_ · m
0" 4 1 4 100	PSI			PSI		°
Slip Angle(-180 to +	· 180)	<u> </u>	Slip Angl	e (-180 to +180)		· · ·
		<b>VEHICLE</b>	MOTION			
Sustained Contact	I INo ( IVec					
	*****************************			145, 110, 1		
	VEHICLE 1			VEHICLE	: 2	
ehicle Rotation	[ ] No	[ ] Yes	Vehicle F	otation	[ ] No	[ ] Yes
Rotation Stop Be	fore Rest [ ] No	[ ] Yes	Rotat	ion Stop Before Res	**********	{ ] Yes
End of Rotation	x	. m	End o	of Rotation X		. m
Position	V		Positi			
	Y PSI	· m				_ · m
				PSI		°
Curved Path	[ ]No	[ ] Yes	Curved P	ath	[ ] No	[ ] Yes
Point on Path	- A	7 XP	/A	on Path		estro.
X	m Y	m		m	Υ	. m
Datet au D		to 30.252000				
	[ ] None [ ] CW [	ICCW		Direction [ ] Nor	· · · · · · · · · · · · · · · · · · ·	[ ] CCW
Rotation > 360°	[ ] No [ ] Yes		Rotation	>360° [ ] No	[ ] Yes	

National Accident Sampling System-Crashworthiness Data System: CRASHPC Program Summary

FRICTION	NFORMATIO	N	TRAJECTORY	INFORMATION
Coefficient of Friction			Trajectory Data [ ] N	to [ ] Yes
Rolling Resistance Option	·		If No. Go To Demage In	formation
			Vehicle 1 Steer Angles	
Vehicle 1 Rolling Re	sistance		LF	° RF •
LF	RF	·	LR:	• RR•
LR	RR	· <del></del>		
			Vehicle 2 Steer Angles	
- Vehicle 2 Rolling Re		1		_ ° RF _ · · · · ·
	RF		LR	_ ° RR •
LR	RR	- ·		
			Terrain Boundary [ ]	No [ ] Yes
			First Point	V
		•	Xm	Y m
			Second Point	
			Xm	·
•			Secondary Coefficient o	f Friction
	ī	DAMAGE IN	FORMATION	
		<i>57</i>		
VE	HICLE 1		VEH:	ICLE 2
Damage Length	L	cm	Damage Length	L <u>252</u> cm
Crush Depths		cm	Crush Depths	C <sub>1</sub> cm
	C <sub>2</sub>			$C_2 \qquad \underline{/ \ D} \text{ cm}$
	C <sub>3</sub>			C <sub>3</sub> 35 cm
		cm		C <sub>4</sub> 3 6 cm
	C*	cm	in the second section of the second section of	C <sub>s</sub> 7 7 cm
	<u> </u>	0111		O6
Damage Offset	D +	cm	Damage Offset	D D G cm
		1.2		
		<u> </u>		
IF THIS COMMON IMPA	ACT WAS WITH A	MOTOR VEHICLE	NOT IN TRANSPORT, FILL IN	THE INFORMATION BELOW.
Model Year:			The Weight, CDC, Scene D	ata and Damage Information
Make:			for this vehicle should be	recorded above.
Model:				
VIN:				
0 1 1	ATTACLL		- d	siana sa sha Eas
Complete and	JATIACH the ap	propriate vehicle	e damage sketch and dimen	sions to the form.

## SUMMARY OF CRASHPC RESULTS USING DAMAGE

#### Special Crash Investigations; TRC/IU Case 95-17, Task 9526

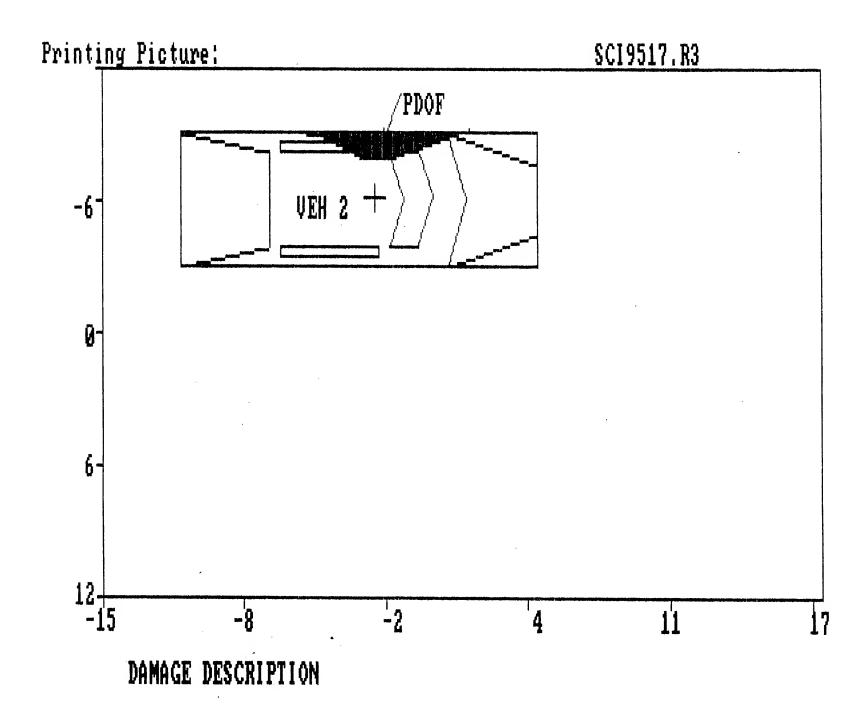
	SPEED CHANGE (DAMAGE)					
VEHICLE #1	(Diamida)					
TOTAL	0 KPH ( 0 MPH)					
LONGITUDINAL	0 KPH ( 0 MPH)					
LATITUDINAL	0 KPH ( 0 MPH)					
PDOF ANGLE	O DEGREES					
ENERGY DISSIPATED =	0 JOULES ( 0 FT-LB)					
VEHICLE #2						
TOTAL	30 KPH ( 19 MPH)					
LONGITUDINAL	-10 KPH ( -6 MPH)					
LATITUDINAL	28 KPH ( 18 MPH)					
PDOF ANGLE	-70 DEGREES					
ENERGY DISSIPATED =	51594 JOULES ( 38049 FT-LB)					

## DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY STIFFNESS CATEGORY	11 0	3 3
VEHICLE WEIGHT	***** KGS (2204586 LBS) *	1433 KGS ( 3159 LBS)
CDC	BARRIER	10LYEW3
PDOF ANGLE	O DEGREES *	-70 DEGREES
CRUSH LENGTH	0 CM. ( 0 IN.) *	252 CM. ( 99 IN.)
C1	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.)
C2	0 CM. ( 0 IN.) *	10 CM. ( 4 IN.)
C3	0 CM. ( 0 IN.) *	35 CM. ( 14 IN.)
C4	0 CM. ( 0 IN.) *	36 CM. ( 14 IN.)
C5	0 CM. ( 0 IN.) *	19 CM. ( 7 IN.)
C6	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.)
D	0 CM. ( 0 IN.) *	6 CM. ( 2 IN.)
D'	0 CM. ( 0 IN.) *	13 CM. ( 5 IN.)
		(* INDICATES DEFAULT VALUE)

## DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	127 CM. ( 50 IN.)	130 CM. ( 51 IN.)
CG TO REAR AXLE	127 CM. ( 50 IN.)	141 CM. ( 56 IN.)
TRACK	127 CM. ( 50 IN.)	150 CM. ( 59 IN.)
CG TO FRONT OF VEH	127 CM. ( 50 IN.)	228 CM. ( 90 IN.)
CG TO REAR OF VEH	-127 CM. ( -50 IN.)	-270 CM. (-106 IN.)
CG TO SIDE OF VEH	127 CM. ( 50 IN.)	92 CM. ( 36 IN.)
MOMENT OF INERTIA	***** KGS (***** LBS)	12385 KGS ( 27304 LBS)
VEHICLE MASS	2600 KGS ( 5732 LBS)	4 KGS ( 8 LBS)



### **EDCRASH**

(DAMAGE ONLY ALGORITHM)

No  $\boldsymbol{A}$  and  $\boldsymbol{B}$  values are available for the case vehicle; therefore, the default values were used.

SUMMARY OF EDCRASH RESULTS

Lic. User: NHTSA #8

S/N: 0266-8 Version: 4.61

SCI95-17 TEXAS

MESSAGES:

#### NO MESSAGES

#### VEHICLE # 1

IMPACT SPEED km/h		SPEED CHANGE km/h			BASIS FOR RESULTS
FWD	LAT	TOTAL	LONG.	LATERAL	KESULIS
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND CONSERVATION OF LINEAR MOMENTUM
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND DAMAGE
		23.6	-22.1	-8.1	DAMAGE DATA ONLY

#### VEHICLE # 2

IMP SPE km	ED	SI	PEED CHA	NGE	BASIS FOR RESULTS	
FWD	LAT	TOTAL	LONG.	LATERAL	RESULIS	
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND CONSERVATION OF LINEAR MOMENTUM	
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND DAMAGE	
		28.0	-9.6	26.3	DAMAGE DATA ONLY	

## SUMMARY OF DAMAGE DATA (NOTE: '\*\*' indicates default value)

	Vehicle #1	Vehicle #2
CLASS / STIFFNESS CATEGORIES WEIGHT CDC DAMAGE WIDTH CRUSH DEPTH 1 CRUSH DEPTH 2 CRUSH DEPTH 3 CRUSH DEPTH 4 CRUSH DEPTH 5 CRUSH DEPTH 6 DAMAGE MIDPOINT OFFSET DAMAGE ENERGY MAGNITUDE OF PRINCIPAL FORCE DIRECTION OF PRINCIPAL FORCE MOMENT ARM OF PRINCIPAL FORCE	3 / 9 1700.0 kg 01FDEW1 162.0 cm 26.0 cm 18.0 cm 17.0 cm 13.0 cm 11.0 cm 9.0 cm 7.0 cm	3 / 3 1433.0 kg 10LYEW3 252.0 cm 0.0 cm 10.0 cm 35.0 cm 36.0 cm 19.0 cm 0.0 cm 6.0 cm
DAMAGE CENTROID	-6.1 cm	13.1 cm

# DIMENSIONAL, INERTIAL AND CRUSH STIFFNESS PROPERTIES (NOTE: '\*\*' indicates default value)

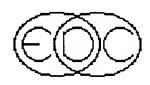
	Vehic	le <b>#</b> 1		Vehic	le #2	
CG TO FRONT AXLE	130.3	Cm	**	130.3	Cm	**
CG TO REAR AXLE	141.0		**	141.0		**
TRACKWIDTH	151.4	cm		144.3	cm	
YAW MOMENT OF INERTIA	3642.9	kg-m^2	**	3070.7	kg-m^2	**
MASS	1697.2			1430.6		
BODY LENGTH FROM CG TO FRO		•	**	228.1	cm	**
BODY LENGTH FROM CG TO REA	R -270.3	cm	**	-270.3	cm	**
BODY OVERALL WIDTH	178.1			180.3	cm	
CRUSH STIFFNESSES:	A	В		A	В	
	lb/in	lb/in^2	1	b/in	lb/in^2	
	373 / ++	37 7 **		73 3 **	57 1 **	

# Vehicle No. 1 Vehicle No. 2 X y CDC/PDOF: 01FDEW1 20.0 deg CDC/PDOF: 10LYEW3 -70.0 deg

181270 N

Max Impact Force:

Max Impact Force:



## **EDCRASH** Damage Profiles

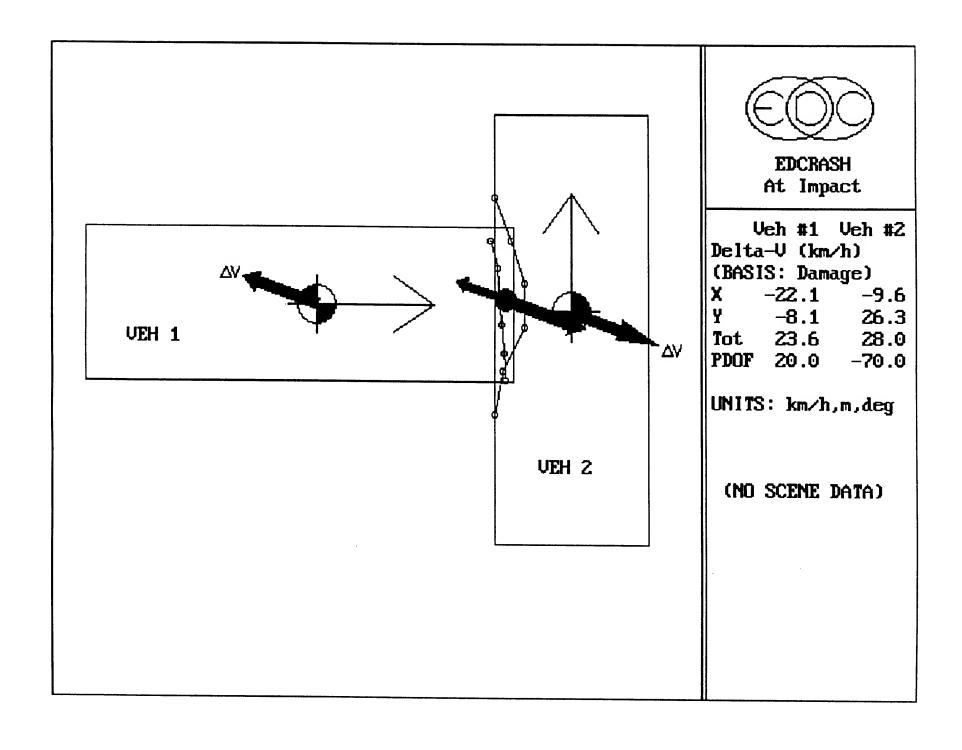
Veh #1 Veh #2 Delta-V (km/h): -22.1-9.6-8.1 26.3 23.6 28.0 Tot

y

ΔΥ

292494 N

Crush Data (cm): 162.0 252.0 7.0 6.0 C1 26.0 0.0 CZ 18.0 10.0 **C3** 17.0 35.0 **C4** 13.0 36.0 **C**5 11.0 19.0 **C6** 9.0 0.0



#### TRC VECTOR ANALYSIS ITERATIONS

The TRC Vector Analysis program was used to determine the resultant theoretical Direction of Principal Force (PDOF) for both vehicles. Heading angles were determined from the scene evidence and weights were obtained from original specifications and interviewees. Based on our inspection of the each vehicle's crush, this contractor initially estimated the PDOFs as  $+15 \pm 5$  degrees for the case vehicle and  $-75 \pm 5$  degrees for vehicle #2.

The driver of the case vehicle indicated in her interview that she was traveling about 56 k.p.h. (35 m.p.h.), below the posted SPEED LIMIT of 64 k.p.h. (40 m.p.h.), when she attempted to brake to avoid vehicle #2. This contractor believes that the case vehicle was most likely traveling 56-64 k.p.h. (35-40 m.p.h.) prior to impact. Because no pre-impact skidmarks were noted on the Police Accident Report, her speed at impact was most likely 48-56 k.p.h. (30-35 m.p.h.). Conflicting evidence exists regarding vehicle #2's speed at impact. The case vehicle driver indicated that vehicle #2 "stopped" in front of her after entering the intersection from the north leg; however, according to the driver of vehicle #2, she indicated that she attempted to accelerate upon seeing the case vehicle. Based on the crush and approximate final rest position of vehicle #2, the PDOF acting on vehicle #2 had to pass behind the center of gravity for the counterclockwise rotation to have occurred. In order to pass behind the center of gravity, the PDOF had to be more toward ten o'clock than nine o'clock. If vehicle #2 had been stopped or going very slow at impact, given the crush pattern, vehicle #2 should have rotated clockwise and moved west or west-northwest; however, it did not. Therefore, vehicle #2 must have been going at least 16 k.p.h. (10 m.p.h.).

Ten iterations of vehicle speeds are shown below: 40-64 k.p.h. (25-40 m.p.h.) for the case vehicle and 16-32 k.p.h. (10-20 m.p.h.) for vehicle #2. The program indicates that as vehicle #2's speed increases, the force collinearity vector rotates toward one and ten o'clock for the case vehicle and vehicle #2, respectively. Iterations two, three, six, and seven most closely match the observed vehicle dynamics. Therefore, after vehicle #2 entered the intersection, the speed at impact was most likely between 16-24 k.p.h. (10-15 m.p.h.). In accordance with NASS, CDS protocol, the PDOFs were assigned at +20 for the case vehicle and -70 for vehicle #2.

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated) (Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

<b>Vector Analysis Area</b>	GV27(V01)	W28 (V02)		
Ln. Axis Heading Angle CG Heading Angle	270 (mph) 270	180 180	(mph)	
CRASH 3 Slip Angle Weight-Cargo	0 11	0 7	·	
Weight-Vehicle Curb Wt Weight-Passenger(s)	1485 204	1374 52		
Weight-Total	1700	1433	(10)	
Estimated Speed Momentum	64 (4 <sub>9</sub> ) 108800	16 22928	210)	
PDOF (Degrees) PDOF (Clock Direction)	12 12	-78 9	91	STM
Theoretical Delta V	30.2	35.8		250
Theoretical Common Vel.	35.5	Post-Ci	rash CG Heading	258

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated) (Neither Vehicle May Be Backing)
(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

<b>Vector Analysis Area</b>	GV27 (V01)	GV28 (V02)			
Ln. Axis Heading Angle	270 (mph)	180	(hph)		
CG Heading Angle	270	180			
CRASH 3 Slip Angle	0	0			
Weight-Cargo	11	7			
Weight-Vehicle Curb Wt	1485	1374			
Weight-Passenger(s)	204	<b>52</b>			
Weight-Total	1700	1433			
Estimated Speed	56 ( <i>35</i> )	16	(o)		
Momentum	95200	22928			
PDOF (Degrees)	14	<del>-</del> 76		91	STM
PDOF (Clock Direction)	12	9			
Theoretical Delta V	26.6	31.6			
Theoretical Common Vel.	31.3	Post-Cr	ash CG	Heading	256

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27 (V01)	V28 (V02)		
Ln. Axis Heading Angle CG Heading Angle	270 (mph) 270	180 180	(mph)	
CRASH 3 Slip Angle	0 11	0		
Weight-Cargo Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total Estimated Speed	1700 48 <i>(30</i> )	1433 16	(10)	
Momentum	81600 16	22928 <del>-</del> 74	<b></b>	STM
PDOF (Degrees) PDOF (Clock Direction) Theoretical Delta V	1 1 23.1	10 27.5		JIM
Theoretical Common Vel.	27.1		rash CG Heading	254

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01) G	V28(V02)		
Ln. Axis Heading Angle	270 (MPh)	180	(mph)	
CG Heading Angle	270	180	•	
CRASH 3 Slip Angle	O	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	40 ( <i>25</i> )	16	(10)	
Momentum	68000	22928		
PDOF (Degrees)	19	-71	<b>400</b> 91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	19.7	23.4		
Theoretical Common Vel.	22.9	Post-Cr	ash CG Heading	251

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01) G	SV28 (V02)		
Ln. Axis Heading Angle	270 (mph)	180	(mph)	
CG Heading Angle	270	180		
CRASH 3 Slip Angle	O	0	,	
Weight-Cargo	11	7	•	
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	64 (40)	24	(15)	
Momentum	108800	34392		
PDOF (Degrees)	18	-72	<b>91</b>	STM
PDOF (Clock Direction)	1	10	•	
Theoretical Delta V	31.3	37.1		
Theoretical Common Vel.	36.4	Post-Cr	ash CG Heading	252

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28 (V02)	
Ln. Axis Heading Angle	270 (mph)	180 (mph)	
CG Heading Angle	270	180	
CRASH 3 Slip Angle	0	0	
Weight-Cargo	11	7	
Weight-Vehicle Curb Wt	1485	1374	
Weight-Passenger(s)	204	52	
Weight-Total	1700	1433	
Estimated Speed	56 ( <i>35</i> )	24 (15)	
Momentum	95200	34392	
PDOF (Degrees)	20	<b>-</b> 70 <b>-70</b> /91	STM
PDOF (Clock Direction)	1	10	
Theoretical Delta V	27.9	33.1	
Theoretical Common Vel.	32.3	Post-Crash CG Heading	250

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated) (Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28 (V02)		
Ln. Axis Heading Angle CG Heading Angle CRASH 3 Slip Angle Weight-Cargo	270 (mph) 270 0	180 180 0	(mph)	
Weight-Vehicle Curb Wt Weight-Passenger(s) Weight-Total Estimated Speed	1485 204 1700 48 <i>(30)</i>	1374 52 1433 24	(15)	
Momentum PDOF (Degrees) PDOF (Clock Direction)	81600 23 1	34392 -67 10	<b>44000</b> 91	STM
Theoretical Delta V Theoretical Common Vel.	24.5 28.3	29.1 Post-Cı	cash CG Heading	247

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated) (Neither Vehicle May Be Backing)
(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28 (V02)			
Ln. Axis Heading Angle	270 (mph)	180	(mph)		
CG Heading Angle	270	180			
CRASH 3 Slip Angle	0	0			
Weight-Cargo	11	7			
Weight-Vehicle Curb Wt	1485	1374			
Weight-Passenger(s)	204	52			
Weight-Total	1700	1433			
Estimated Speed	64 ( <b>1∕∞</b> )	32	(20)		
Momentum	108800	45856			
PDOF (Degrees)	23	<del>-</del> 67		<b>7000</b> /91	STM
PDOF (Clock Direction)	1	10			
Theoretical Delta V	32.7	38.8			
Theoretical Common Vel.	37.7	Post-Ci	cash CG	Heading	247

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated) (Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

<b>Vector Analysis Area</b>	GV27(V01)	SV28 (V02)	•	
Ln. Axis Heading Angle	270 (mph)	180	(mph)	
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433	•	
Estimated Speed	56 <i>(3</i> 5)	32	(20)	
Momentum	95200	45856		
PDOF (Degrees)	26	-64	91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	29.5	35.0		
Theoretical Common Vel.	33.7	Post-C	rash CG Heading	244

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated) (Neither Vehicle May Be Backing)
(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27 (V01)	GV28 (V02)		
Ln. Axis Heading Angle	270 (mph)	180	(mph)	
CG Heading Angle	270	180	•	
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433	•	
Estimated Speed	48 (ఫిం)	32	(a0)	
Momentum	81600	45856	·	
PDOF (Degrees)	29	-61	91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	26.4	31.3		
Theoretical Common Vel.	29.9	Post-Cr	rash CG Heading	241

## TRC VECTOR ANALYSIS PROGRAM

PDOF (Direction of Principal Force) is assigned based on the vehicular crush. Heading Angles are assigned based on scene evidence and Police Accident Reported crash configurations. This program was created to enable researchers in the NASS CDS to assess the compatibility of their assigned vehicle PDOFs and heading angles. When two vehicles are involved in an impact, researchers were often times submitting PDOFs that were not compatible with their heading angle assignments, indicating a lack of understanding of basic vector analysis concepts. Subsequently, the TRC has used this program to help verify our field PDOF assignments by making logical changes in the reconstructed crash configuration and determining the affect these changes have on PDOF.

Principal: This program is based on the geometric triangle rule (i.e., the sum of the three angles of a triangle must equal 180 degrees). The direction of one vehicle's (e.g., the case vehicle or Vehicle #1) CG (i.e., Center of Gravity) forms one side of the triangle. The direction of the other vehicle's (e.g., Vehicle #2) CG forms a second side of the triangle. The third side of the triangle is then formed by each vehicle's respective PDOF because the forces are assumed to act collinear.

Assumptions: It is assumed that each vehicle's weight can be represented by a "point-mass". It is assumed that the vector force acting on each vehicle goes through the center of gravity (i.e., CG) of the vehicle. Further, it is assumed that the vehicles move off together joined as one object. This program does not take into affect the mass reduction that occurs in other reconstruction programs since its primary purpose is to check the compatibility of the field determined PDOF and Heading Angle.

Inputs: Heading Angle, Slip Angle ("Yaw"), Weights (Curb Weight, Cargo Weight, and Weight of all occupants), and Speed

Outputs: This program's primary output is each vehicle's theoretical PDOF, presented in both degrees and CDC clock directions. Other outputs include a theoretical Delta V and a theoretical Common Velocity. The theoretical Delta V shows the maximum Delta V for the given speeds and weights assuming a dead center impact. For special crash investigation purposes, the last two outputs should be essentially ignored.

Use: The TRC uses this program on nonaxial collisions involving two vehicles to vary the "less established inputs" in order to determine what theoretical affect these changes have on our field observed PDOFs. The most solid input is the weights of the respective vehicles. Even though the cargo weight is rarely accurately known, its order of magnitude is such that in the vast majority of crashes its affect is minor. The next solid inputs are the vehicle's heading angle and slip angle. In most cases these are fairly well known from the available physical evidence. The least solid input is the vehicle's speed. The submitted iterations show the inputs and what variations to those inputs that the TRC took into consideration. The PDOF outcomes are then compared with our field observed PDOF and adjustments are made, if necessary, in our final coding.

Purpose: This program is but one more tool in the hands of a researcher aimed at providing the best data.

## Appendix C:

NASS CDS ACCIDENT FORM

National Highway Traffic Safety Administration

#### **ACCIDENT FORM**

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

2. Case Number - Stratum

9517

#### **IDENTIFICATION**

3. Number of General Vehicle Forms Submitted

02

4. Date of Accident (Month, Day, Year)



5. Time of Accident



Code reported military time of accident.

NOTE: Midnight = 2400 Unknown = 9999

#### **SPECIAL STUDIES - INDICATORS**

Check (✓) each special study (SS15-SS18 below) that has been completed; code 1 for the checked special studies and 0 for the special studies not checked.

6. \_\_\_ SS15 Administrative Use

0

0\_

7. \_\_\_ SS16 Pedestrian Crash Data Study
(Data for this special study available

in a separate file.)

SS17 Impact Fires

0

·

9. SS18 Unsafe Driver Actions

0

10. \_\_\_ SS19

0

#### NUMBER OF EVENTS

11. Number of Recorded Events in This Accident

0/

Code the number of events which occurred in this accident.

#### **ACCIDENT EVENTS**

For each event that occurred in the accident, code the lowest numbered vehicle in the left columns and the other involved vehicle or object in the right columns.

Accident Event Sequence Number	Vehicle Number	Class Of Vehicle	General Area of Damage	Vehicle Number or Object Contacted		General Area of Damage
12. <u>0 1</u>	13. <u>O</u>	14. <u>04</u>	15. <u>F</u>	16. <u>D</u> <u>2</u>	17. <u>03</u>	18. <u></u>
19. <u>0</u> <u>2</u>	20	21	22	23	24	25
26. <u>0</u> <u>3</u>	27	28	29	30	31	32
33. <u>0 4</u>	34	35	36.	37	38	39
40. <u>0</u> <u>5</u>	41	42	43	44	45	46

IF GREATER THAN FIVE EVENTS, CONTINUE CODING ON THE ACCIDENT EVENT SUPPLEMENT

(01) Not a motor vehicle (01) Subcompact/mini (wheelbase < 254 cm) (02) Compact (wheelbase ≥ 254 bm < 425 cm) (03) Intermediate (wheelbase ≥ 255 bm < 4278 cm) (05) Largest (wheelbase ≥ 235 bm < 4278 cm) (05) Linky (wheelbase ≥ 235 bm < 4278 cm) (05) Linky (wheelbase ≥ 231 cm) (05) Unknown passenger care zare v≥ 10 ≤ 4,500 kgs GVWR) (14) Compact utility vehicle (≤ 4,500 kgs GVWR) (15) Unknown utility type (16) Utility station wapon (≤ 4,500 kgs GVWR) (16) Utility station wapon (≤ 4,500 kgs GVWR) (17) Unknown utility type (18) Unknown utility type (19) Unknown van type (≤ 4,500 kgs GVWR) (18) Unknown medium/heavy truck type (19) Unknown van type (≤ 4,500 kgs GVWR) (19) Unknown van type (≤ 4,500 kgs GVWR) (19) Unknown van type (≤ 4,500 kgs GVWR) (19) Unknown van type (≤ 4,500 kgs GVWR) (19) Unknown van type (≤ 4,500 kgs GVWR) (19) Unknown van type (≤ 4,500 kgs GVWR) (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown wan type (≤ 4,500 kgs GVWR) (19) Unknown medium/heavy truck type (19) Unknown wan type (≤ 4,500 kgs G	CODES FOR CLASS OF VEHICLE				
CDS APPLICABLE (0) Not a motor vehicle (N) Noncollision (E) Eff side (U) Undercarriage (VEHICLES (F) Front (E) Back (U) Undercarriage (S) Unknown  TDC (0) Not a motor vehicle (L) Left side (U) Undercarriage (S) Unknown  TDC (I) Noncollision (B) Back of unit with cargo area (V) Front of cargo area (VFFINT (rear of trailer or straight truck) (U) Undercarriage (S) Unknown  CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED (U) Undercarriage (S) Unknown  CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED (S5) Fonce (58) Wall (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Unknown (S9) (S2) Fire hydrant (S9) Other intraunit damage (specify): (S9) Other intraunit damage (specify): (S9) Other fixed object (specify): (S9) Unknown fixed object (S9) Unknown fixed object (S9) Unknown fixed object (S9) Unknown fixed object (S9) Unknown fixed object (S9) Unknown fixed object (S9) (S9) Other nomotorist or conveyance (S9) Other nomotorist or conveyance (S9) Other nomotorist or conveyance (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) (S9) Other traffic barrier (Includes guardrail) (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Un	(00) Not a motor vehicle  (01) Subcompact/mini (wheelbase < 254 cm)  (02) Compact (wheelbase ≥ 254 but < 265 cm)  (03) Intermediate (wheelbase ≥ 265 but < 278 cm)  (04) Full size (wheelbase ≥ 278 but < 291 cm)  (05) Largest (wheelbase ≥ 278 but < 291 cm)  (09) Unknown passenger car size v≥ 10 ≤ 6 → 20  (14) Compact utility vehicle  (15) Large utility vehicle (≤ 4,500 kgs GVWR)  (16) Utility station wagon (≤ 4,500 kgs GVWR)  (19) Unknown utility type  (20) Minivan (≤ 4,500 kgs GVWR)  (21) Large van (≤ 4,500 kgs GVWR)  (24) Van Based school bus (≤ 4,500 kgs GVWR)  (28) Other van type (≤ 4,500 kgs GVWR)  (29) Unknown van type (≤ 4,500 kgs GVWR)		(38) (39) (45) (48) (49) (50) (58) (59) (60) (67) (68) (78) (79) (80) (90)	Other pickup truck (\$\leq 4,500 kgs GVWR)  Unknown pickup truck type (\$\leq 4,500 kgs GVWR)  Other light truck (\$\leq 4,500 kgs GVWR)  Unknown light truck type (\$\leq 4,500 kgs GVWR)  Unknown light vehicle type  School bus (excludes van based)(\$\rightarrow 4,500 kgs GVWR)  Other bus (\$\rightarrow 4,500 kgs GVWR)  Unknown bus type  Truck (\$\rightarrow 4,500 kgs GVWR)  Tractor without trailer  Tractor-trailer(s)  Unknown medium/heavy truck type  Unknown light/medium/heavy truck type  Motored cycle  Other vehicle	
CDS APPLICABLE (0) Not a motor vehicle (N) Noncollision (E) Eff side (U) Undercarriage (VEHICLES (F) Front (E) Back (U) Undercarriage (S) Unknown  TDC (0) Not a motor vehicle (L) Left side (U) Undercarriage (S) Unknown  TDC (I) Noncollision (B) Back of unit with cargo area (V) Front of cargo area (VFFINT (rear of trailer or straight truck) (U) Undercarriage (S) Unknown  CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED (U) Undercarriage (S) Unknown  CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED (S5) Fonce (58) Wall (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Building (S9) Unknown (S9) (S2) Fire hydrant (S9) Other intraunit damage (specify): (S9) Other intraunit damage (specify): (S9) Other fixed object (specify): (S9) Unknown fixed object (S9) Unknown fixed object (S9) Unknown fixed object (S9) Unknown fixed object (S9) Unknown fixed object (S9) Unknown fixed object (S9) (S9) Other nomotorist or conveyance (S9) Other nomotorist or conveyance (S9) Other nomotorist or conveyance (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) (S9) Other traffic barrier (Includes guardrail) (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Unknown nonfixed object (S9) Un	20000 00000			DAMAGE (CAD)	
APPLICABLE (N) Noncollision (E) Back of unit with cargo area (V) Front of cargo area (V) Front of cargo area (F) Front (rear of trailer or straight truck) (T) Top (U) Undercarriage (9) Unknown  CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED  (01-30) — Vehicle Number (57) Fence (58) Wall  Noncollision (31) Overturn — rollover (excludes end-over-end) (60) Ditch or culvert (31) Building (32) Rollover — end-over-end (61) Ground (63) Ground (63) Fire or explosion (62) Fire hydrant (63) Curb (63) Other intraunit damage (specify): (68) Other fixed object (specify): (68) Other fixed object (specify): (69) Unknown fixed object (specify): (70) Passenger car, light truck, van, or other vehicle not in-transport (42) Tree (> 10 cm in diameter) (73) Monbould (74) Embankment (74) Other nonmotorist or conveyance (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (≤ 10 cm in diameter) (75) Pole or post (diameter unknown) (75) Other traffic barrier (includes guardrail) (77) Train (77) Polecify):	CDS APPLICABLE (0) Not a motor vehicle AND OTHER (N) Noncollision	(R) I (L) I	Right side Left side	(T) Top (U) Undercarriage (9) Unknown	
Noncollision	APPLICABLE (N) Noncollision VEHICLES (F) Front	(B) I	Back of u	nit with cargo area (V) Front of cargo area ailer or straight truck) (T) Top rof tractor) (U) Undercarriage	
Collision With Fixed Object  (41) Tree (≤ 10 cm in diameter) (42) Tree (> 10 cm in diameter) (43) Shrubbery or bush (44) Embankment (45) Breakaway pole or post (any diameter) (50) Pole or post (> 10 cm in diameter) (51) Pole or post (> 10 cm but ≤ 30 cm in diameter) (52) Pole or post (> 30 cm in diameter) (53) Pole or post (diameter unknown)  (54) Concrete traffic barrier (55) Impact attenuator (56) Other traffic barrier (includes guardrail) (57) Medium/heavy truck or bus not in-transport (72) Pedestrian (73) Cyclist or cycle (74) Other nonmotorist or conveyance (75) Vehicle occupant (76) Animal (77) Train (77) Train (78) Trailer, disconnected in transport (79) Object fell from vehicle in-transport (88) Other nonfixed object (specify): (89) Unknown nonfixed object (98) Other event (specify):	Noncollision (31) Overturn — rollover (excludes end-over-end) (32) Rollover — end-over-end (33) Fire or explosion (34) Jackknife (35) Other intraunit damage (specify):	IMBE	(57) (58) (59) (60) (61) (62) (63) (64)	Fence Wall Building Ditch or culvert Ground Fire hydrant Curb Bridge Other fixed object (specify):	
	(39) Noncollision — details unknown  Collision With Fixed Object (41) Tree (≤ 10 cm in diameter) (42) Tree (> 10 cm in diameter) (43) Shrubbery or bush (44) Embankment (45) Breakaway pole or post (any diameter)  Nonbreakaway Pole or Post (50) Pole or post (≤ 10 cm in diameter) (51) Pole or post (> 10 cm but ≤ 30 cm in diameter) (52) Pole or post (> 30 cm in diameter) (53) Pole or post (diameter unknown)  (54) Concrete traffic barrier (55) Impact attenuator (56) Other traffic barrier (includes guardrail)	er)	(70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (88) (89)	on with Nonfixed Object Passenger car, light truck, van, or other vehicle not in-transport Medium/heavy truck or bus not in-transport Pedestrian Cyclist or cycle Other nonmotorist or conveyance  Vehicle occupant Animal Train Trailer, disconnected in transport Object fell from vehicle in-transport Other nonfixed object (specify): Unknown nonfixed object	

## Appendix D:

NASS CDS VEHICLE FORMS: CASE VEHICLE

U.S. Department of Transportation

National Highway Traffic Safety

#### GENERAL VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

Admin	stration	CRASHWURTHINESS DATA STSTE
	1.5	12. Speed Limit
	Primary Sampling Unit Number	(000) No statutory limit
2.	Case Number - Stratum 9317	Code posted or statutory speed limit in kmph
3.	Vehicle Number	(999) Unknown
	VEHICLE IDENTIFICATION	$\frac{4D}{D}$ mph X 1.6093 = $\frac{64}{D}$ kmph
4.	Vehicle Model Year 9 4	13. Police Reported Alcohol Presence For Driver
	Code the last two digits of the model year	(0) No alcohol present
	(99) Unknown	(1) Yes alcohol present (7) Not reported
5.	Venicle Make (specify):	(8) No driver present (9) Unknown
	Applicable codes are found in your	0.4
	NASS Data Collection, Coding and Editing Manual.	14. Alcohol Test Result For Driver 96
	(99) Unknown	Code actual value (decimal implied before first digit – 0.xx)
_	Vehicle Model (specify):	(95) Test refused
6.	Vehicle Model (specify); GDR 0 3 4	(96) None given
	Applicable codes are found in your	(97) AC test performed, results unknown (98) No driver present
	NASS Data Collection, Coding and	(99) Unknown
	Editing Manual. (999) Unknown	Source: PAR
	(333) SIIRIOWII	Source
7.	Body Type O 4	15. Police Reported Other Drug Presence For
	Note: Applicable codes may be found on the back of this page.	Driver
	the Back of this page.	(0) No other drug(s) present (1) Yes other drug(s) present
8.	Vehicle Identification Number	(7) Not reported
	TU .) ( ( ) ( ) ( ) ( )	(8) No driver present
	TH4CC2664RC	(9) Unknown
	Left justify; Slash zeros and letter Z (0 and Z)	16. Other Drug Specimen Test Result For Driver
	No VIN - Code all zeros Unknown - Code all nines	(O) No specimen test given
a	Vehicle Special Use (This Trip)	(1) Drug(s) not found in specimen
Э.	(0) No special use	(2) Drug(s) found in specimen, (specify):
	(1) Taxi	(3) Specimen test given, results unknown or not
	<ul><li>(2) Vehicle used as school bus</li><li>(3) Vehicle used as other bus</li></ul>	obtained (8) No driver present
	(4) Military	(9) Unknown if specimen test given
	(5) Police	
	(6) Ambulance (7) Fire truck or car	17. Driver's Zip Code
	(8) Other (specify):	(00001)Driver not a resident of U.S. or territories
	(9) Unknown	Code actual 5-digit zip code
	OFFICIAL RECORDS	(99998)No driver present (99999)Unknown
10	Police Reported Vehicle Disposition	(3333)3111113111
	(0) Not towed due to vehicle damage	18. Driver's Race/Ethnic Origin
	(1) Towed due to vehicle damage	(1) White (non-Hispanic)
	(9) Unknown	(2) Black (non-Hispanic) (3) White (Hispanic)
11.	Police Reported Travel Speed 999	(4) Black (Hispanic)
	Code to the nearest kmph (NOTE: 000 means	(5) American Indian, Eskimo or Aleut
	less than 0.5 kmph) (160) 159.5 kmph and above	(6) Asian or Pacific Islander (7) Other (specify):
	(999) Unknown	
		(8) No driver present (9) Unknown
	mph X 1.6093 = kmph	(5) Olikilowii

#### CODES FOR BODY TYPE

#### CDS APPLICABLE VEHICLES

#### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (O2) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (O4) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify):
- (09) Unknown automobile type

#### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

#### Utility Vehicles (≤ 4,500 kgs GVWR)

- (14) Compact utility (Jeep CJ-2 CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban (impusine)
- (19) Utility, unknown body type

#### Van Based Light Trucks (≤ 4,500 kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van (≤ 4,500 kgs GVWR)
- (23) Van based motorhome (≤ 4,500 kgs GVWR)
- (24) Van based school bus (≤ 4,500 kgs GVWR)
- (25) Van based other bus (≤ 4,500 kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify):
- (29) Unknown van type

## Light Conventional Trucks (Pickup style cab, ≤ 4,500 kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

#### Other Light Trucks (≤ 4,500 kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van. or light truck)

#### OTHER VEHICLES

#### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):
- (59) Unknown bus type

#### Medium/Heavy Trucks (> 4,500 kgs GVWR)

- (60) Step van (> 4,500 kgs GVWR)
- (61) Single unit straight truck (4,500 kgs < GVWR ≤ 8,850 kgs)
- (62) Single unit straight truck (8,850 kgs < GVWR ≤ 12,000 kgs)</p>
- (63) Single unit straight truck (> 12,000 kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type (79) Unknown truck type (light/medium/heavy)

## Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify):
- (89) Unknown motored cycle type

#### Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

	PRECRASH ENVIRONMENTAL DATA		1
	PRECRASH ENVIRONMENTAL DATA	25. Roadway Surface Condition	/
	2	(1) Dry	_
19.	Relation To Interchange Or Junction	(2) Wet	
	(O) Non-interchange area and non-junction	(3) Snow or slush	
	(1) Interchange area related	1	
1		(4) Ice	
Ī	Non-Interchange junctions	(5) Sand, dirt, or oil	
		(8) Other (specify):	
1	(2) Intersection related	(9) Unknown	
	(3) Driveway, alley access related	(6, 6,	
ļ	(4) Other junction (specify)		,
		26. Light Conditions/	′
	(5) Unknown type of junction	(1) Daylight	
		(2) Dark	
	(9) Unknown	(3) Dark, but lighted	
1	(o) Chancon	1	
l		(4) Dawn	
١	T (1)   Flam	(5) Dusk	
20.	Trafficway Flow	(9) Unknown	
	(0) Not physically divided (two way traffic)		
l	(1) Divided trafficway-median strip without		
ļ	positive barrier	27. Atmospheric Conditions	)
l	(2) Divided trafficway-median strip with positive	(0) No adverse atmospheric-related driving	
l	barrier	conditions	
1	(3) One way traffic	•	
l	· · ·	(1) Rain	
1	(9) Unknown	(2) Sleet/hail	
		(3) Snow	
امما	H 1 0/7 will and	(4) Fog	
21.	Number Of Travel Lanes	(5) Rain and fog	
	(1) One	(6) Sleet and fog	
	(2) Two		
1	(3) Three	(7) Other (e.g., smog, smoke, blowing sand or	
1	(4) Four	dust, etc.) (specify):	
	(5) Five		
	(6) Six	(9) Unknown	
1		٠	-
	(7) Seven or more	28. Traffic Control Device	>
	(9) Unknown	(O) No traffic control(s)	_
i	•	(1) Traffic control signal (not RR crossing)	
22	Roadway Alignment	(1) Traffic control signal (not fill clossing)	
22.		- Domiletoni	
l	(1) Straight	Regulatory	
l	(2) Curve right	(2) Stop sign	
	(3) Curve left	(3) Yield sign	
	(9) Unknown	(4) School zone sign	
		(5) Other regulatory sign (specify):	
		SPSED LIMIT	
23.	Roadway Profile	(6) Warning sign (not RR crossing)	
ł	(1) Level	(7) Unknown sign	
l	(2) Uphill grade (>2%)		
1	(3) Hill crest	(8) Miscellaneous/other controls including RR	
ļ	(4) Downhill grade (>2%)	controls (specify):	
1	(5) Sag		
1	(9) Unknown	(9) Unknown	
1	(a) OUVIOMII		
1	^		1
24	Roadway Surface Type	29. Traffic Control Device Functioning	X
	(1) Concrete	(0) No traffic control device	
1		1 ' '	
1	(2) Bituminous (asphalt)	(1) Traffic control device not functioning	
1	(3) Brick or block	(specify):	-
1	(4) Slag, gravel, or stone	(2) Traffic control device functioning properly	
1	(5) Dirt	(9) Unknown	
	(8) Other (specify):		
	(b) Other (specify).		
	(9) Unknown		

	PRECRASH DRIVER RELATED DATA	This Vehicle Traveling
	Driver's Distraction/Inattention To Driving 0 3	(10) Over the lane line on left side of travel lane
10.	Driver's Distraction/Inattention To Driving 0 5	(11) Over the lane line on right side of travel lane
	(Prior To Recognition Of Critical Event)	(12) Off the edge of the road on the left side
	(00) No driver present (01) Attentive or not distracted	(13) Off the edge of the road on the right side
	(O2) Looked but did not see	(14) End departure
	1021 Looked but did not see	(15) Turning left at intersection
	Distractions	(16) Turning right at intersection (17) Crossing over (passing through) intersection
	(03) By other occupant(s), (specify):	(18) This vehicle decelerating
	(04) By moving object in vehicle (specify):	(19) Unknown travel direction
	(04) By moving object in vehicle (specify):	(19) OHKHOWH HEARI GIRECTION
	toti by moving object in termes (epison).	Other Motor Vehicle In Lane
	(05) While talking or listening to cellular phone	(50) Other vehicle stopped
	(specify location and type of phone):	(51) Traveling in same direction with lower steady
		speed
	(06) While dialing cellular phone (specify location	(52) Traveling in same direction while decelerating
	and type of phone):	(53) Traveling in same direction with higher speed
		(54) Traveling in opposite direction
	(07) While adjusting climate controls	(55) In crossover
	(08) While adjusting radio, cassette, CD (specify):	(56) Backing
		(59) Unknown travel direction of other motor
	(09) While using other device/object in vehicle	vehicle in lane
	(specify):	
	(10) Sleepy or fell asleep	Other Motor Vehicle Encroaching Into Lane
	(11) Distracted by outside person, object, or event	(60) From adjacent lane (same direction)—over left
	(specify):	lane line
	(12) Eating or drinking	(61) From adjacent lane (same direction)—over right
	(13) Smoking related	lane line
	(97) Distracted/inattentive, details unknown	(62) From opposite direction—over left lane line
	(98) Other, distraction (specify):	(63) From opposite direction—over right lane line
	(00) 11-1	(64) From parking lane
	(99) Unknown	(65) From crossing street, turning into same
31.	Pre-Event Movement (Prior to	direction
	Recognition of Critical Event)	(66) From crossing street, across path
	(00) No driver present	(67) From crossing street, turning into opposite
	(01) Going straight	direction (68) From crossing street, intended path not known
	(02) Decelerating in traffic lane	(70) From driveway, turning into same direction
	(03) Accelerating in traffic lane	(71) From driveway, across path
	(04) Starting in traffic lane	(72) From driveway, turning into opposite direction
	(05) Stopped in traffic lane (06) Passing or overtaking another vehicle	(73) From driveway, intended path not known
	(07) Disabled or parked in travel lane	(74) From entrance to limited access highway
	(08) Leaving a parking position	(78) Encroachment by other vehicle—details
	(09) Entering a parking position	unknown
	(10) Turning right	
	(11) Turning left	Pedestrian, Pedalcyclist, or Other Nonmotorist
	(12) Making a U-turn	(80) Pedestrian in roadway
	(13) Backing up (other than for parking position)	(81) Pedestrian approaching roadway
	(14) Negotiating a curve	(82) Pedestrian—unknown location
	(15) Changing lanes	(83) Pedalcyclist or other nonmotorist in roadway
	(16) Merging	(specify):
	(17) Successful avoidance maneuver to a previous	(84) Pedalcyclist or other nonmotorist approaching
	critical event	roadway, (specify):
	(97) Other (specify):	(85) Pedalcyclist or other nonmotorist—unknown
		location (specify):
	(99) Unknown	
	Critical Precrash Event	Object or Animal
32.	Cillical rieciasii Event	(87) Animal in roadway
	This Vehicle Loss of Control Due To:	(88) Animal approaching roadway
	(01) Blow out or flat tire	(89) Animal—unknown location
	(02) Stalled engine	(90) Object in roadway
	(03) Disabling vehicle failure (e.g., wheel fell off)	(91) Object approaching roadway (92) Object—unknown location
	(specify): (04) Non-disabling vehicle problem (e.g., hood flew	(98) Other critical precrash event (specify):
		1001 Other chical bicciash again (shecily).
	up) (specify):	(99) Unknown
	IOE) Poor road conditions (guiddle not hole ice etc.)	
	(05) Poor road conditions (puddle, pot hole, ice, etc.)	(55) Chikhowh
	(specify):	(55) Challetti
		(55) Chilliowh

(09) Unknown cause of control loss

Attempted Avoidance Maneuver  (00) No driver present  (01) No avoidance maneuver  (02) Braking (no lockup)  (03) Braking (lockup)  (04) Braking (lockup unknown)  (05) Releasing brakes  (06) Steering left  (07) Steering right  (08) Braking and steering left  (09) Braking and steering right  (10) Accelerating  (11) Accelerating and steering right  (12) Accelerating and steering right  (98) Other action (specify):  (99) Unknown  Pre-Impact Stability  (0) No driver present  (1) Tracking  (2) Skidding longitudinally—rotation less than 30 degrees  (3) Skidding laterally—clockwise rotation  (4) Skidding laterally—counterclockwise rotation  (7) Other vehicle loss-of-control (specify):	35. Pre-Impact Location (0) No driver present (1) Stayed in original travel lane (2) Stayed on roadway but left original travel lane (3) Stayed on roadway, not known if left original travel lane (4) Departed roadway (5) Remained off roadway (6) Returned to roadway (7) Entered roadway (9) Unknown  36. Accident Type (Note: Applicable codes on back of this page) (OO) No impact Code the number of the diagram that best describes the accident circumstance (98) Other accident type (specify): (99) Unknown
(9) Precrash stability unknown	

STOP HERE IF GV07 DOES NOT EQUAL 01 - 49

Cale	Configur	ACCIDENT	TYPES (includes int	tenti		
koc)	A Right		œ <u></u>	<del>_</del> <del>_</del> ,	<b>4</b>	06
	Roadside Departure	DRIVE OFF CONTROL TRACTIO			PECIFICS THER	SPECIFICS UNKNOWN
Single Driver	B Left	<del></del>	<del>_</del> <del>_</del> <del>_</del> <del>_</del> <del>_</del> <del>_</del> <del>_</del> <del>_</del> <del>_</del> <del>_</del>		00	10
Single	Roadside Departure	DRIVE OFF CONTROL TRACTION			PECIFICS OTHER	SPECIFICS UNKNOWN
-	C Forward	11 12 •	13	14	15	16
	Impact	PARKED VEH. STA. OBJECT	PEDESTRIAN/ EN ANIMAL DE		PECIFICS OTHER	SPECIFICS UNKNOWN
	D Rear-End	20 21 21 21 21	2 2 2 2	76	EACH • 32)	(EACH • 33)
Trafficway Direction	Real Line	8TOPPED SLOWER 21. 22. 23 28. 26. 27	0ECEL. 28. 30. 31	31 <b>8</b>	PECIFICS ITHER	SPECIFICS UNKNOWN
e Trafficwa e Directom	E Forward	HAU BY	360		41	42) (EACH • 43)
Sank	Impaci	CONTROL/ TRACTION LOSS TRACTION LOSS	AVOID COLLISION WITH VEH.	WITH OBJECT	OTHER	UNKNOWN
	F Sideswipe Angle	44 45 45 47		CH • 48) SPGS ER	(EACH	I • 49) CS UNKNOWN
I)	G Head-On	SO 51 (EACH • E SPECIACS OTHER		CH • 53) ECIPICS UNKNOWN		
Same Trailicway Oppusute Directium	H Forward Impact	CONTROL/ TRACTION LOSS  CONTROL/ TRACTION LOSS	ST AVOID COLLISION WITH VEH.	AVOID COLLISH WITH OBJECT	61	62)(EACH + 63) B SPECIPICS UNKNOWN
S III	! Sideswipe: Angle	64 (EACH - SPECIFICS OTHER	1	ACH • 67) ECIFICS UNKNOWN		
Change Trafficway Vehick Turning	J. Turn Across Path	INITIAL OPPOSITE DIRECTIONS	FAME DIRECTIONS	·/	EPECIFICS OTHER	SPECIFICS - UNKNOWN
Change Trafficw Vehick Turning	K. Turn Into	7 7	81	E 72		M) (EACH • 55)
2	Path	TURN INTO SAME DIRECTION	TURN INTO OPPOSI	ITE DIRECTIONS	SPECIFICS OTHER	SPECIFICS UNKNOWN
V Intersecting Paths (Vehicle Damage)	L. Straight Paths	# F7	<b>5</b>	ACH • 50) PECIFICS THER	(EACH • 1 speciacs	II) UNKNOWN
VI Miscel	M. Backing Eic	E2 SS OTHER VEH. OR OBJECT BACKING VEM.	•	8 Other Accider 9 Unknown Acc 9 No Impect		

	* * * * * * * * * * * * * * * * * * *
OCCUPANT RELATED  37. Driver Presence in Vehicle (0) Driver not present	44. Vehicle Cargo Weight O, O, O O O O O O O O O O O O O O O O
(1) Driver present (9) Unknown	(450) 4,500 kilograms or more (999) Unknown ,25 lbs x .4536 =,/ kgs
38. Number of Occupants This Vehicle (00-96) Code actual number of occupants for this vehicle (97) 97 or more	Source: DRIVER DATA
(99) Unknown	45. Rollover
39. Number of Occupant Forms Submitted <u>0</u> 3	(00) No rollover (no overturning)
AIR BAG RELATED	Rollover (primarily about the longitudinal axis) (01-16) Code the number of quarter turns
40. Is this an AOPS Vehicle? (0) No (includes unknown) (1) Yes - researcher determined (2) VIN determined air bag system (3) VIN determined automatic (passive) belts	(17) Rollover, 17 or more quarter turns (specify): (98) Rolloverend-over-end (i.e., primarily about the lateral axis) (99) Rollover (overturn), details unknown
<ul> <li>(4) VIN determined air bag and automatic (passive) belts</li> <li>41. Air Bag(s) Deployment, First Seat Frontal (0) Not equipped or not available</li> </ul>	46. Rollover Initiation Type (00) No rollover (01) Trip-over (02) Flip-over (03) Turn-over
<ul> <li>(1) No air bags deployed</li> <li>Single Air Bag Vehicle</li> <li>(2) Driver air bag deployed</li> <li>(3) Driver air bag, unknown if deployed</li> </ul>	(04) Climb-over (05) Fall-over (06) Bounce-over (07) Collision with another vehicle
Multiple Air Bag Vehicle (4) Driver side only deployed (5) Passenger side only deployed (6) Driver and passenger side deployed (7) Driver and passenger side unknown if	(08) Other rollover initiation type specify):  (98) Rolloverend-over-end (99) Unknown rollover initiation type  47. Location of Rollover Initiation
deployed (8) Air bag(s) deployed, details unknown (9) Unknown	(0) No rollover (1) On roadway (2) On shoulder—paved (3) On shoulder—unpaved
42. Air Bag(s) Deployment, Other Than First Seat Frontal (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of	(4) On roadside or divided trafficway median (8) Rolloverend-over-end (9) Unknown
impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event	48. Rollover Initiation Object Contacted (Note: Applicable codes on back of page)  49. Location on Vehicle Where Initial Principal
during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed	Tripping Force Is Applied (0) No rollover (1) Wheels/tires
<ul><li>(7) Nondeployed</li><li>(9) Unknown</li><li>Specify type of "other" air bag present:</li></ul>	<ul> <li>(2) Side plane</li> <li>(3) End plane</li> <li>(4) Undercarriage</li> <li>(5) Other location on vehicle (specify):</li> </ul>
	(6) Non-contact rollover forces (specify):
VEHICLE WEIGHT ITEMS	(8) Rolloverend-over-end (9) Unknown
43. Vehicle Curb Weight, 4 8 0 Code weight to nearest 10 kilograms.	50. Direction of Initial Roll (0) No rollover (1) Roll right - primarily about the longitudinal axis
(045) Less than 450 kilograms (610) 6,100 kilograms or more (999) Unknown	(2) Roll left - primarily about the longitudinal axis (8) Rolloverend-over-end (9) Unknown roll direction
Source: 94 Branhoms shipping	(a) Challetti fon direction
Source: 94 Branhoms Shipping Weight + 100 lbs	

OVERRIDE/UNDERRIDE (THIS VEHICLE)	ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V
51. Front Override/Underride (this Vehicle)	58. Basis for Total (Resultant) Delta V
52. Rear Override/Underride (this Vehicle)  (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride	(highest) (00) No vehicle inspection
Override (see specific CDC)  (Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49))  (1) 1st CDC  (2) 2nd CDC  (3) Other not automated CDC (specify):	Delta V Calculated  (01) Reconstruction program -damage only routine  (02) Reconstruction program -damage and trajectory routine  (03) Missing vehicle algorithm  Delta V Not Calculated  (04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
(7) Medium/heavy truck or bus override (of any configuration) (9) Unknown HEADING ANGLE AT IMPACT FOR	All vehicles within scope (CDC applicable) of reconstuction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable
Values: (000)-(359) Code actual value (997) Noncollision (998) Impact with object (999) Unknown  53. Heading Angle For This Vehicle	reconstruction technique, regardless of adequacy of damage data.  (05) Rollover (06) Other non-horizontal forces (07) Sideswipe type damage (08) Severe override
54. Heading Angle For Other Vehicle 780	(09) Yielding object (10) Overlapping damage
RECONSTRUCTION DATA  55.Towed Trailing Unit (0) No towed unit (1) Yes—towed trailing unit (9) Unknown	(11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify):
56. Documentation of Trajectory Data for This Vehicle (0) No (1) Yes	(98) Other, (specify):
57. Post Collision Condition of Tree or Pole (For Highest Delta V) (0) Not collision (for highest delta V) with tree or pole (1) Not damaged (2) Cracked/sheared (3) Tilted < 45 degrees (4) Tilted ≥ 45 degrees (5) Uprooted tree (6) Separated pole from base (7) Pole replaced (8) Other (specify):	

COMPUTER GENERAT	TED CRASH SEVERITY
59. Total Delta V	Highest  998  Nearest kmph (highest)  Nearest kmph (secondary)  (NOTE: 000 means less than 0.5 kmph) (160) 159.5 kmph and above (998) Trajectory algorithm not run (999) Unknown  DELTA V CONFIDENCE LEVEL  64. Confidence In Reconstruction Program Results (For Highest Delta V) (0) No reconstruction (1) Collision fits model — results appear reasonable (2) Collision fits model — results appear low (4) Borderline reconstruction — results appear reasonable
Highest  61. Lateral Component of Delta V	OTHER SPEED ESTIMATE  Highest  O 2 1  23 Nearest kmph (highest)  Nearest kmph (secondary)  (NOTE: 000 means less than 0.5 kmph) (160) 159.5 kmph and above (999) Unknown

IF YES: IS A COMPLETED PROGRAM SUMMARY INCLUDED? [ ] YES [ ] NO

66. Estimated Highest Delta V (Researcher Determined) (0) Reconstruction Delta V coded  Estimated Delta V (1) Less than 10 kmph (2) ≥ 10 kmph but < 25 kmph (3) ≥ 25 kmph but < 40 kmph (4) ≥ 40 kmph but < 55 kmph  Other estimates of damage severity (6) Minor (7) Moderate (8) Severe	ESTIMATED DELTA V	VEHICLE INSPECTION
(9) Unknown	Determined) (0) Reconstruction Delta V coded  Estimated Delta V (1) Less than 10 kmph (2) ≥ 10 kmph but < 25 kmph (3) ≥ 25 kmph but < 40 kmph (4) ≥ 40 kmph but < 55 kmph (5) ≥ 55 kmph  Other estimates of damage severity (6) Minor (7) Moderate (8) Severe	(0) No inspection (1) Vehicle fully repaired-no damage evident (2) Partial inspection (specify):

••• IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67=0), •••

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,

OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.



U.S. Department of Transportation National Highway Traffic Safety

National Highy Administration		EX	TERIOF	VEHI	CLE F	ORM	NA		CCIDENT		
1. Prima	ry Sampling Unit Nu	2	1	<u>O</u> 3	. Vehicl	e Numb	er			0	
2. Case	Number - Stratum	4.	51	王							
			VEHICLE	IDENTI	FICAT	ION					
VIN I	H4CC	266	4R	<u></u>				_	Model Y	ear $\mathcal{G}$	4
Vehicle M	ake (specify):	CURA	4		Vehicle	Model (s	specify):		1601	R G	5
			L	OCATO	R						
	e end of the damage amaged axle for side		ct to the ve	hicle Ion	gitudina	i center	line or b	oumper (	corner fo	or end in	npacts
Specific Imp		of Direct Dama	ge		Location	of Field	L	ı	ocation o	f Max Cri	ush
01	gen in	FROM	(JBC)	ACR	055 U	whole	bung	pe/	$\mathcal{C}$	-/	
							·				
		CRU	SH PROF	ILE IN	CENTI	VIETER	S				
i 1 3	Measure C1 to C6 fr mpacts.  Free space value is of the individual C local side taper, etc. Reco	defined as the tions. This pord the value of the polynomials as necessity	ne distance may include e for each ecessary to	e between de the fol C-measu	n the ba lowing: irement	seline a bumper and ma	nd the d lead, be ximum d	original l umper t	body co	ntour ta	
Specific Impact Number	Plane of Impact C-Measurements	Width (CDC)	Max Crush	Field	C,	C,	C <sub>3</sub>	C₄	C₅	C <sub>6</sub>	±D
1	@ Bumper FREE	140		147	41	25	19	15	17.5	24	+7
	FREE	-			15	7	Z	15	7	15	
	FINAL	e)(			26	18	17	13	10.5	'9	+7
	·										
		·									
				<b></b>							
				+							ļ
				+							
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				1							
				1							

## ORIGINAL SPECIFICATIONS WORK SHEET

	inches x 2.54 = $\frac{\cancel{2} \cancel{9} \cancel{0}}{\cancel{\text{cm}}}$
Wheelbase $\underline{\hspace{1cm}} \underline{\hspace{1cm}}  \underline{\hspace{1cm}} \hspace$	.6
Overall Length $190.4$	inches x 2.54 = $483$ cm
With the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second	inches x 2.54 = $\frac{1}{2}$ $\frac{7}{8}$ cm
Curb Weight News 3, 1 4 2	pounds x 0.4536 = $1,425$ kg
Average Track 59.4 _ 59.6	inches x 2.54 = $151$ cm
Front Overhang	inches x 2.54 = $-85$ cm
Rear Overhang	inches x 2.54 = $\frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{2}$ cm
Undeformed End Width	inches x 2.54 = $\frac{1}{6}$ cm
Engine Size: cyl/displ	cc   x   0.001 =
I5 cylinders 150 5-passengers, 4 doors	$CID  x  0.0164 = \underline{\qquad} L$
5-passengers, 4 doors	
Branham's Shipping Weig	ht .
1994 Acura Vigor GS	3,173 lb 1,439 kg
J	1,485 kg
	3,273

## SPECIAL CRASH INVESTIGATION ADDENDUM

Submodel Designation: {specify} Color: {specify} 6/ack Kepair Cost: \$	
Transmission: {drde} (Automatic)   Manual Speed: 3-speed (4-speed) 5-speed   Other:	
Steering: {circle} Power-assisted   Manual Type: rack-and-pinion worm-and-gear   Other	her
{please describe}:	
Brakes: {circle} Power-assisted   Manual Type: 4-wheel disc   4-wheel drum   4-wheel front disc, rear drum   Other:	hydraulic
Observed Defects: {apecify}	
Fleet Type: {circle} Private vehicle   Rental vehicle   Leased vehicle   Commercial vehicle   Other {please describe}:	

	VEHICLE DAMAGE SKETCH	
TIRE—WHEEL DAMAGE  a. Rotation physically b. Tire restricted deflated  RF 2 RF 2 LF 2 LF 2 LR 2 LR 2 LR 2 LR 2	ORIGINAL SPECIFICATIONS  Wheelbase	WHEEL STEER ANGLES (For locked front wheels or displaced rear axles only)  RF ± o  LF ± o  RR ± o  LR ± o  Within ± 5 degrees  DRIVE WHEELS
TYPE OF TRANSMISSION  ☐ Manual	Rear Overhang /// cm Undeformed End Width /// cm Engine Size: cyl./displ. 5 cyl/2.5 L  MEASUREMENTS IN CENTIMETERS	Approximate Cargo Weightkg
in reconstructing the accident (e.g., damage received on the back of this	trication such as component removal by torching, prying, or hydrauli	f pulling trailer, sketch type of treiler and

American HONDA Moto						Ca 905	01
	·		Dimensions	Ship		P.O.E.	P.O.E.
Type of Body		Wheel	Inches	Wt.	Tax	West	Enet
Pass. Cap.	Model	Base	Lt. x Wt. x H	t. Ib.	H.P.	Coast	Coast
Man. trans. 5-speed; EPA Mileage E	stimate 29	735					
2-PS 2-dr del Sol Si	EH616R		157.3" x 66.7" x 49		13.92	16,450	16,450
5-PS 2-dr Coupe EX	EJ112R		172.8" x 66.9" x 50		13.92	13,750	13,750
5-PS 2-dr Coupe EXA	EJ113R		172.8" x 66.9" x 50		13.92	14,600 13,300	14,600 13,300
5-PS 3-dr Hatchback Si	EH338R EH339R	101.3"	160.2" x 66.9" x 50 160.2" x 66.9" x 50	).7" 2327 ).7" 2371	13.92 13.92	14,150	14,150
5-PS 3-dr Hatchback SiA 5-PS 4-dr Sedan EX	EH959R		173.0" x 66.9" x 51		13.92	15,920	15,920
Auto. Trans. 4-speed; EPA Mileage			175.0 1 00.0 1 0			,	.0,020
2-PS 2-dr sel Sol Si	EH626R	93.3"	157.3" x 66.7" x 49	.4" 2411	13.92	17,200	17,200
5-PS 2-dr Coupe EX			172.8" x 66.9" x 50		13 92	14,500	14,500
5-PS 2-dr Coupe EXA			172.8" x 66.9" x 50		13.92	15,350	15,350
5-PS 4-dr Sedan EX	EH969R	103.2"	173.0" x 66.9" x 51	.7° 2512	13.92	16,670	16,670
1994 CIVIC FWD 4 cyl 1.5 li	ter SOH	C PGM	FI Gas Engine	(Avalva)			
Bore & Stroke 2.95"x3.33"; Tax H.P.	13 92 Ne	HP 70	@5000: Torque 91	<b>2000:</b> 91.	1 cu.in., 1.5	5 litter	
Man. trans. 5-speed; EPA Mileage I	Estimate (4	9-state)4	2/46 (CA) 40/45	<b>6</b> 2000, 0			
5-PS 3-dr Hatchback CX	EH235R	101.3"	160.2" x 66.9" x 5	0.7™ 2051	13.92	9,500	9,500
					WATER	<b>C</b> \	
1994 CIVIC FWD 4 cyl 1.5 I	iter SOH	CPGN	FI Gas Engine	(16 Valve	)(VIEC	·E)	
Bore & Stroke 2.95"x3.33"; Tax H.P				g4500 91.1	cu.m., 1.51	ner .	
Man. Trans. 5-speed; EPA Mileage 5-PS 3-dr Hatchback VX	CM237D	1013"	160.2" x 66.9" x 5	7" 2043	13.92	11.620	11,620
						,	,
1994 Civic FWD 4L cyl 1.6	liter DO	1C PGI	MFI Gas Engin	e(16 valv	e)(VTEC	;)	
Bore & Stroke 3.19x3.05; Tax H.P.			0@7600; Torque 1	11@7000; 9	7 cu.in., 1.	6 liter	
Man. Trans. 5-speed; EPA Mileage		6/30	457 OH . CC 78 . A	0 4H 0 400	46.00	17,900	17,900
2-PS 2-dr del Sol VTEC	EG217R	93.3	157.3" x 66.7" x 4	9.4 2420	16.28	17,900	17,500
1994 ACCORD FWD 4 cyl	2.2 liter 5	SOHC	PGMFI Gas En	gine(16 v	raive)		
Bore & Stroke 3.35x3.75; Tax H.P.	17.96; SAE	H.P. 13	0@5300; Torque 1	39 <b>@</b> 4200; 1	32 cu.in, 2	.2 liter	
Man. Trans. 5-speed; EPA Mileage	Estimates	25/31(W	agon 24/30)				
5-PS 4-dr Sedan DX			184.0" x 70.1" x 5		17.96	14,480	14,480
5-PS 4-dr Sedan DXA w/ABS	CD551R		184.0" x 70.1" x 5		17.96	15,430	15,430 17,400
5-PS 4-dr Sedan LX	CD553R		184.0" x 70.1" x 5 184.0" x 70.1" x 5		17.96 17.96	17,400 18,350	18,350
5-PS 4-dr Sedan LXA w/ABS 5-PS 2-dr Coupe DX	CD554R CD712R		184.0" x 70.1" x 5		17.96	14,280	14,280
5-PS 2-dr Coupe DXA w/ABS	CD711R		184.0" x 70.1" x 5		17.96	15,230	15,230
5-PS 2-dr Coupe LX	CD713R		184.0" x 70.1" x 5		17.96	17,200	17,200
5-PS 2-dr Coupe LXA w/ABS	CD714R		184.0" x 70.1" x 5	4.7" 2754	17.96	18,150	18,150
5-PS 5-dr Wagon LX	CE172R	106.9"	187.8" x 70.1' x 5	5.9" 2975	17.96	18,370	18,370
5-PS 5-dr Wagon LXA w/ABS	CE173R		187.8" x 70.1' x 5	5.9" 3008	17.96	19,320	19,320
Auto, Trans. 4-speed; EPA Mileage		23/29 (V	Vagon 21/27)			4	
5-PS 4-dr Sedan DX	CD562R		184.0" x 70.1" x 5		17.96	15,230	15,230
5-PS 4-dr Sedan DXA w/ABS	CD561R CD563R		184.0" x 70.1" x 5 184.0" x 70.1" x 5		17.96 17.96	16,180 18,150	18,180 18,150
5-PS 4-dr Sedan LX 5-PS 4-dr Sedan LXA w/ABS	CD564R		184.0" x 70.1" x 5			19,100	19,100
5-PS 2-dr Coupe DX	CD722R		184.0" x 70.1" x 5		17.96	15,030	15,030
5-PS 2-dr Coupe DXA w/ABS			184.0" x 70.1" x 5			15,980	15,980
5-PS 2-dr Coupe LX	CD723R		184.0" x 70.1" x 5			17,950	17,950
5-PS 2-dr Coupe LXA w/ABS	CD724R		184.0" x 70.1" x 5	54.7" 2820	17.96	18,900	18,900
5-PS 5-dr Wagon LX	CE182R	106.91	187.8" x 70.1' x 5	5.9" 3041	17.96	19,120	19,120
5-PS 5-dr Wagon LXA w/ABS	CE183R	106.91	187.8" x 70.1' x 5	55.9" 3074	17.96	20,070	20,070
1994 ACCORD FWD 4 cyl	2 2 144-	SOHO	PGMFI Gas E	naine/18	valveliV	TEC)	
Bore & Stroke 3.35x3.75; Tax H.P.							
Man. Trans. 5-speed; EPA Mileage				&,			
5-PS 4-dr Sedan EX			184.0" x 70.1" x	55.1" 2908	17.96	19,950	19,950
5-PS 4-dr Sedan EXL w/Leather		106.91	184.0" x 70.1" x	55.1" 2908		21,000	21,000
5-PS 2-dr Coupe EX	CD715F		184.0" x 70.1" x			19,750	19,750
5-PS 2-dr Coupe EXL w/Leather			184.0" x 70.1" x			20,800	20,800
5-PS 5-dr Wagon EX	CE179F		' 187.8" x 70.1' x	55. <b>9" 3</b> 041	17.96	20,970	20,970
Auto. Trans. 4-speed; EPA Mileag							
5-PS 4-dr Sedan EX	CD565F		' 184.0" x 70.1" x			20,700	20,700
5-PS 4-dr Sedan EXL w/Leathe			184.0" x 70.1" x				21,750
5-PS 2-dr Coupe EX	CD725F		' 184.0" x 70.1" x ' 184.0" x 70.1" x				20,500 21,500
5-PS 2-dr Coupe EXL w/Leather	DE 100/201		184.0"X 70.1"X 187.8"x 70.1'X				21,500
5-PS 5-dr Wagon EX	UE189	100.9	107.0 X /U.1 X	JUS JUS	17.90	21,720	21,720
1004 ACHDA NSY DWD V	6 041 3 0	Mar D	OHO VITEO DO	MEI God	Engine	124 velva	WTECL

1994 ACURA NSX RWD V6 cyl 3.0 liter DOHC VTEC PGMFI Gas Engine(24 valve)(VTEC) Bore & Stroke 3.54x3.07; Tax H.P. 30.08; SAE H.P. 270@7100; Torque 210@5300; 181 cu.lin, 3.0 liter

BRANHAM AUTOMOBILE REFERENCE BOOK-FOREIGN CAR SECTION

BRANHAM AUTOMOBILE REFERENCE BOOK-FOREIGN CAR SECTION												
<b>American HONDA Mot</b>	or Co	TURE	Arrano, Esta			<b>9</b> 05	01					
	,		Dimensions	Ship.		P.O.E.	P.O.E.					
Type of Body		Wheel	Inches	Wt.	Tax	West	East					
Pass. Cap.	Model	Base	Lt. x Wt. x Ht.	lb.	H.P.	Coast	Coast					
Man. Trans 5-speed; EPA Mileage Estimates 19/24												
2-PS 2-dr Sport NSX	NA115R		174.2" x 71.3" x 46.1"	2923	30.08	75,000	75,000					
2-PS 2-dr Sport NSX Bore & Stroke 3.54x3.07; Tax H.P.	NA116R		174.2" x 71.3" x 46.1"	E200: 40	30.08	معقا ٥						
Auto. Trans ; EPA Mileage Estimate		n.P. 252	@ccoo, lorque ∠ lo@	5500, 16	i cu.in, 3.	U III.						
2-PS 2-dr Sport NSX	NA125R	99.6"	174.2" x 71.3" x 46.1"		30.08							
2-PS 2-dr Sport NSX	NA126R	99.6"	174.2" x 71.3" x 46.1"	3012	30.08	79,000	79,000					
1994 ACURA LEGEND FWD V6 cyl 3.2 liter; SOHC PGMFI Gas Engine(24 valve)												
Bore & Stroke 3.54"x3.31"; Tax H F												
Man. Trans. 5-speed; EPA Mileage												
5-PS 4-dr Sedan LC 5-PS 4-dr Sedan LL			194.9" x 71.3" x 55.1" 194.9" x 71.3" x 55.1"		30.08	34,160	34,160					
Auto. Trans. 4-speed; EPA Mileage			194.9 X / 1.3 X 30.1	3410	30.08	35,660	35,660					
5-PS 4-dr Sedan LC	KA765R		194.9" x 71.3" x 55.1"	3454	30.08	34,960	34,960					
5-PS 4-dr Sedan LL	KA766R		194.9" x 71.3" x 55.1"	3454	30.08	36,460	36,460					
5-PS 4-dr Sedan LS	KA767R	114.6"	194.9" x 71.3" x 55.1"	3477	30.08	39,000	39,000					
1994 ACURA LEGEND FW	D V6 cvl	3.2 lite	r: SOHC PGMFI	Gas Fn	aine/24	(aylay						
Bore & Stroke 3.54"x3.31"; Tax H.F	. 30.08; S/	NE H.P. 23	0@6200; Torque 206	<b>Q</b> 4500 1	96 cu.im.	3 2 liter						
Man. Trans. 6-speed; EPA Mileage	Estimates 4 8 1	18/26										
5-PS 4-dr Sedan GS	KA758R		194.9" x 71.3" x 55.1"		30 08	41,100	41,100					
5-PS 2-dr Coupe L 5-PS 2-dr Coupe LS	KA816R KA817R		192.5" x 71.3" x 53.7" 192.5" x 71.3" x 53.7"	3411 3433	30.08 30.08	38,100	38,100					
Auto. Trans. 4-speed; EPA Mileage			192.5 X / 1.5 X 55./	3433	30 06	41,900	41,900					
5-PS 4-dr Sedan GS	KA768R		194.9" x 71.3" x 55.1"	3510	30.08	41,100	41,100					
5-PS 2-dr Coupe L	KA826R	111.4"	192.5" x 71.3" x 53.7"	3455	30.08	38,100	38,100					
5-PS 2-dr Coupe LS	KA827R	111.4"	192.5" x 71.3" x 53.7"	3477	30.08	41,900	41,900					
1994 ACURA VIGOR FWD	5 cyl 2.5	Itted SC	OHC PGMFI Gas	Engine	(20 val	ve)						
Bore & Stroke 3.35"x3.4"; Tax H.P.	22.45; SAI	EH.P. 176										
Man. Trans. 5-speed; EPA Mileage												
5-PS 4-dr Sedan LS 5-PS 4-dr Sedan GS			190.4" x 70.1" x 52.0" 190.4" x 70.1" x 52.0"		22.45 22.45	26,350	26,350					
Auto. Trans. 4-speed EPA Mileage			190.4 X /0 1 X 52.0	3107	22.45	28,350	28,35)					
5-PS 4-dr Sedan LS			190.4" x 70.1" x 52.0"	3111	22.45	27,100	27,100					
5-PS 4-dr Securi GS	CC266R	(110.4")	190.4" x 70.1" x 52.0"	<b>3173</b>	22.45	29,100	29,100					
1994 ACURA INTEGRA FV	VD 4 cvl	1.8 liter	DOHC PGMFI G	as Eng	Ine(16	(avisv						
Bore & Stroke 3.19"x3.5"; Tax H.P.	16.28; SAI	E H.P. 142	206300; Torque 1270	5200; 1	2 cu.in.,	1.8 liter						
Man. Trans. 5-speed; EPA Mileage												
4-PS 3-dr Coupe RS 4-PS 3-dr Coupe LS			172.4" x 67.3" x 50.8"		16.28	14,980	14,980					
5-PS 4-dr Sedan RS	DB754R		172.4" x 67.3" x 50.8" 178.1" x 67.3" x 52.1"	2572 2552	16.28 16.28	17,650 15,740	17,650 15,740					
5-PS 4-dr Sedan LS			178.1" x 67.3" x 52.1"		16.28	17,650	17,650					
Auto, Trans, 4-speed; EPA Mileage	Estimates	24/31					,					
4-PS 3-dr Coupe RS			172.4" x 67.3" x 50.8"		16.28	15,730	15,730					
4-PS 3-dr Coupe LS 5-PS 4-dr Sedan RS	DC445R		172.4" x 67.3" x 50.8"		16.28	18,400	18,400					
5-PS 4-dr Sedan LS	DB764R DB765R		178.1" x 67.3" x 52.1" 178.1" x 67.3" x 52.1"		16.28 16.28	16,490 18,400	16,490 18,400					
1994 ACURA INTEGRA FY	VD 4 cyl	1.8 liter	DOHC PGMFI G	as Eng	Ine(16	valve)(Vī	(EC)					
Bore & Stroke 3.19"x3.43"; Tax H.I			70@7600; Torque 128	<b>@</b> 6200;	109 cu.in.	, 1. lit <del>e</del> r						
Man. Trans. 5-speed; EPA Mileage 4-PS 3-dr Coupe VTEC GS-R			172.4" x 67.3" x 50.8"	2596	16.28	19,850	19,850					
5-PS 4-dr Sedan GS-R			178.1" x 67.3" x 52.1"		16.28	20,180	20,180					
1004 PRELLINE SERVES E							20,100					
1994 PRELUDE SERIES F Bore & Stroke 3.35"x3.74"; Tax H.I	17 CY	I Z.Z ING	r SUHU PGMFI (	as En	gine(16	valve)						
Man. Trans. 5-speed; EPA Mileage			30@52UU; Forque 142	<b>Q</b> 34000,	132 cu.in.	, 2.2 itter						
4-PS 2-dr Coupe S			174.8" x 69.5" x 50.8"	2672	17.96	18,450	18,450					
Auto, Trans. 4-speed; EPA Mileage	Estimates	23/28		20,2		10,430	10,750					
4-PS 2-dr Coupe S			174.8" x 69.5" x 50.8"	2725	17.96	19,200	19,200					
1994 PRELUDE SERIES F	WD 4-^~	12214-	r DONC BONE!	200 E-	alac/45		•					
Bore & Stroke 3.42"x3.74"; Tax H.I	P. 18.71: S	AEHP 1	11 DUNG PUMPI ( 80 <b>0</b> 5800: Tarana 156	>83 EN 2004500	y###(16 138 co i∽	vaive)						
Man. Trans. 5-speed; EPA Mileage	Estimates	22/26		-g-300,	. 30 GU.RT.	, 2.3 iil <del>e</del> i						
4-PS 2-dr Coupe Si	BB215R	100.4"	174.8" x 69.5" x 50.8"	2773	18.71	21,850	21,850					
4-PS 2-dr Coupe Si4WS Auto, Trans, 4-speed; EPA Milesgi	BB216R	100.4"	174.8" x 69.5" x 50.8"	2839	18.71	24,650	24,650					
		-77/77										

- 80 -

Nauonai A	cadent Sample	ing System-Crasi		NORKSHE				rage		
		C	ODES FOR	OBJECT COI	NTACTED					
(01-30) — Vehicle Number  Noncollision				(5 (5	7) Fence 8) Wall 9) Building	Wali				
(31) Overturn — rollover (excludes end-over-end (32) Rollover—end-over-end (33) Fire or explosion				(6 (6	<ol> <li>Ground</li> <li>Fire hyd</li> </ol>	Ground Fire hydrant				
(34) Jackknife (35) Other intraunit damage (specify):				(6	3) Curb 4) Bridge 8) Other fix					
(36) Noncollision injury (38) Other noncollision (specify):				(6	(69) Unknown fixed object					
(39) Noncollision — details unknown				Collision with Nonfixed Object (70) Passenger car, light truck, van, or other						
(41)	Collision With Fixed Object (41) Tree (≤ 10 cm in diameter) (42) Tree (> 10 cm in diameter)					vehicle not in-transport  Medium/heavy truck or bus not in-transport Pedestrian				
(43) Shrubbery or bush (44) Embankment			(7	3) Cyclist o	Cyclist or cycle  Other nonmotorist or conveyance					
(45) Breakaway pole or post (any diameter)				(7	6) Animal					
(50)	Nonbreakaway Pole or Post (50) Pole or post (≤ 10 cm in diameter)					) Trailer, disconnected in transport				
	diameter)	<ul><li>&gt; 10 cm but ≤</li><li>&gt; 30 cm in dian</li></ul>		(79) Object fell from vehicle in-transport (88) Other nonfixed object (specify):						
	Pole or post ( Concrete traff	diameter unknow	n)		9) Unknow		-			
(55)	Impact attenu		guardrail)		8) Other ev 9) Unknow			<del></del>		
		DEFORMAT	TON CLASS	IFICATION E	BY EVENT N	UMBER (5)		·		
Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	Specific Longitudinal or Lateral Location	Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent		
01	02	20		E	D	E	<u>w</u>	01		
				_		_				
						<del></del>		<del></del>		
							<u> </u>			

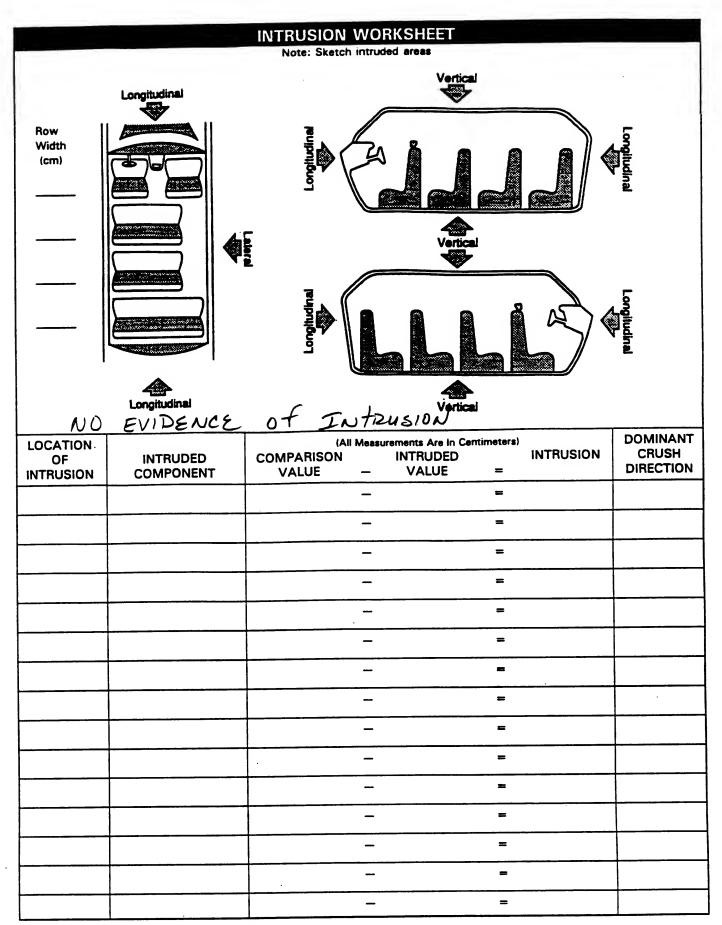
	COLLISION DEFORMATION CLASSIFICATION								
HIGHEST I	DELTA "V"								
Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent		
4. <u>0</u>	5. <u>D</u> 2	6. 0 /	7. <u>F</u>	8. <u>D</u>	9. <u>E</u>	10. <u>W</u>	11. 0 /		
Second Hi	Second Highest Delta "V"								
12	13	14	15	16	17	18	19		
		CRUS	H PROFILE	IN CENTIM	ETERS				
	The crush pro in the appr	file for the dan opriate space	nage described below. (ALL N	in the CDC(s)	above should S ARE IN CEN	be documente ITIMETERS.)	ed .		
HIGHEST I	DELTA "V"								
20. 	21. 				C <sub>5</sub>	C <sub>6</sub>	22. 		
162	026	018	017	<u>013</u> <u>0</u>	011 0	09	007		
Second Hi	ghest Delta "V	•							
23. 	24. 				C <sub>5</sub>	C <sub>6</sub>	25. ±D		
						<del>-</del>	<u></u>		
(Coded impact (250)	ormed End Widt d when highest is an end pland Code to the ne 250 centimete No highest sev	severity e impact.) earest centimet es or more		(650) (999)	Note to the necessary of the continueter of the continueter of the continuete of the continuete of the continuete of the continuete of the continuete of the continuete of the continuete of the continuete of the continue	ers or more	280		
	Unknown	erity eriu pidne	, mipact		· "iches ^ al Average Trac		_		
(For high	Damage Width ghest severity in Code to the new 250 centimete Unknown	earest centimet	<u> 140</u>	(185)	Code to the no centimeter 185 centimeter Unknown	earest	151		

		FUEL SYSTEM
30. Are CDCs Documented but Not Coded on The Automated File? (0) No (1) Yes  31. Researcher's Assessment of Vehicle Disposition (0) Not towed due to vehicle damage (1) Towed due to vehicle damage (9) Unknown  32. Is This A Multi-Stage Manufactured Vehicle And/Or A Certified Altered Vehicle? (0) No post manufacturer modifications (1) Yes - post manufacturer modifications (specify):	<u>o</u>	35. Location of Fuel Tank-1 Filler Cap  36. Location of Fuel Tank-2 Filler Cap  (0) No fuel tank (1) On back plane (2) Aft of center of the rear wheels (rear axle) on left side plane (3) Aft of center of the rear wheels (rear axle) on right side plane (4) Forward of center of the rear wheels (rear axle) on left side plane (5) Forward of center of the rear wheels (rear axle) on right side plane (6) Over the center of the rear wheels (rear axle) on left side plane (7) Over the center of the rear wheels (rear axle) on right side plane (8) Other (specify):  (9) Unknown
(Include photograph of CERTIFICATION PLACARD in case report) (9) Unknown if vehicle is modified  FIRE OCCURRENCE  33. Fire Occurrence (0) No fire  Yes, fire occurred (1) Minor	0	37. Type of Fuel Tank-1  38. Type of Fuel Tank-2  10) No fuel tank (electrical vehicle) (1) Metallic (2) Non-metallic (9) Unknown  39. Location of Fuel Tank-1  40. Location of Fuel Tank-2 (0) No fuel tank (1) Aft of center of the rear wheels (rear axle) left side (2) Aft of center of the rear wheels (rear axle)
(1) Minor (2) Major (9) Unknown  34. Origin of Fire (0) No fire (1) Vehicle exterior (front, side, back, top) (2) Exhaust system (3) Fuel tank (and other fuel retention system parts) (4) Engine compartment (5) Cargo/trunk compartment (6) Instrument panel (7) Passenger compartment area (8) Other location (specify):  (9) Unknown	<u>Ø</u>	(3) Aft of center of the rear wheels (rear axle) right side (4) Forward of center of the rear wheels (rear axle) centered (5) Forward of center of the rear wheels (rear axle) left side (6) Forward of center of the rear wheels (rear axle) right side (7) Over center of the rear wheels (rear axle) (8) Other (specify): (9) Unknown  41. Damage to Fuel Tank-1  42. Damage to Fuel Tank-2 (0) No fuel tank (1) No damage to fuel tank (2) Deformed, no seam failure (3) Deformed, with a seam failure (4) Punctured (5) Lacerated (ripped) (6) Abraded (scraped) (7) Filler neck separation from the fuel tank (8) Other damage (specify): (9) Unknown

Leaks	age Location of Fuel System-1		47. Is This Vehicle Equipped With More Than Two Fuel Tanks?
Laghe	nes Location of Fuel System-2	0	(0) No (one or two tanks only)
Leake	No final tenk		
			Yes - More Than Two Tanks
(1)	No tuel leakage		(1) Yes no damage to any tank or filler
Prima	ary Area Of Leakage		cap and no fuel system leakage
(2)	Tank		(2) Yes no damage to any tank or filler
(3)	Filler neck		cap but there is fuel system leakage
(4)	Cap		(specify leakage location):
			(3) Yes - damage to an additional tank or
			filler cap and there is fuel system leakage
			(specify the following):
(3)	Officiowii		Type of tank
			▼ 1. 1
	- 4	$\wedge$ /	Filler cap location
Fuel	ı ype-1	<u> </u>	
	_	^ ^	Tank damage
Fuel '	Type-2	$\alpha$	Location of leakage
			Type of fuel
Singl	e Fuel Type		(9) Unknown if more than two tanks
_	• •		
			× ×
			COMMENTS
	·		
(80)	Other (Hydrogen or others) (specity)	:	
Elect	ric Powered or Electric/Solar		
		•	
(18)	Other (Specify):		
400:	Out to be and down at the Ar		
(98)	Other Hybrid (specify):		
(99)	Unknown fuel type		
			1
			NEWELLOLE WAS NOT TOWER ***
	*** STOP: IF THE CDS /	APPLICAB	RE AFHICLE MAS NOT LOMED
		(GV	10=0)
	DO NOT COMPI	LETE THE	INTERIOR VEHICLE FORM.
	Leaks (0) (1) (1) (2) (3) (4) (5) (6) (8) (9) Fuel Singl (00) (01) (02) (03) (04) (05) (06) (07) (08) Elect Power (10) (11) (12) (13) (14) (18) (98)	(4) Cap (5) Lines/pump/filter (6) Vent/emission recovery (8) Other (specify):	Leakage Location of Fuel System-2  (0) No fuel tank (1) No fuel leakage  Primary Area Of Leakage (2) Tank (3) Filler neck (4) Cap (5) Lines/pump/filter (6) Vent/emission recovery (8) Other (specify): (9) Unknown  Fuel Type-1  Fuel Type-2  Single Fuel Type (00) No fuel tank (01) Gasoline (02) Diesel (03) CNG (Compressed Natural Gas) (04) LPG (Liquid Petroleum Gas) also known as Propane (05) LNG (Liquid Natural Gas) (06) Methanol (M100 or M85) (07) Ethanol (E100 or E85) (08) Other (Hydrogen or others) (specify):  Electric Powered or Electric/Solar Powered Vehicles (10) Lead Acid Battery (11) Nickel-Iron Battery (12) Nickel-Cadmium Battery (13) Sodium Metal Chloride Battery (14) Sodium Sulfur Battery (18) Other (Specify):  (98) Other Hybrid (specify):  (99) Unknown fuel type

NATIONAL ACCIDENT SAMPLING SYSTEM

lational Highway Traffic Safety INIERIUR VE	CRASHWORTHINESS DATA SYSTEM
1.0	GLAZING
1. Primary Sampling Unit Number	Type of Window/Windshield Glazing
2. Case Number - Stratum <u>9517</u>	15. WS / 16. LF / 17. RF / 18. LR / 19. RR
3. Vehicle Number	20. BL $\frac{4}{2}$ 21. Roof $\frac{3}{2}$ 22. Other $\frac{5}{2}$
INTEGRITY	(O) No glezing
4. Passenger Compartment Integrity (00) No integrity loss  Yes, Integrity Wes Lost Through (01) Windshield (02) Door (side) (03) Door/hatch (back door) (04) Roof (05) Roof glass (06) Side window (07) Rear window (backlight) (08) Roof and roof glass (09) Windshield and door (side) (10) Windshield and roof (11) Side end reer window (side window and backlight) (12) Windshield and side window (13) Door end side window (98) Other combination of ebove (specify):	(0) No glezing (1) AS-1 — Laminated (2) AS-2 — Tempered (3) AS-3 — Tempered-tinted (original) (4) AS-2 — Tempered-with efter market tint (5) AS-3 — Tempered-tinted (with additional efter market tint) (6) AS-14 — Glass/Plastic (7) Glazing removed prior to accident (8) Other (specify): (9) Unknown  Window Precrash Glazing Status  23. WS
Door, Tailgate or Hatch Opening  5. LF / 6. RF / 7. LR / 8. RR / 9. TG/H / O	Glazing Damage from Impact Forces 31. WS 7 32. LF / 33. RF / 34. LR / 35. RR/
(0) No door/gate/hatch (1) Door/gate/hatch remeined closed end operational (2) Door/gate/hatch came open during collision (3) Door/gate/hatch jemmed shut (8) Other (specify):  (9) Unknown  Damage/Failure Associated with Door, Tailgate or Hatch	36. BL / 37. Roof / 38. Other  (0) No glazing (1) No glazing demage from impact forces (2) Glazing in place and crecked from impact forces (3) Glazing in place and holed from impact forces (4) Glazing out-of-place (cracked or not) and not holed from impact forces (5) Glazing out-of-place and holed from impact forces (6) Glazing disintegrated from impact forces (7) Glazing removed prior to accident
Opening in Collision. If IV05-IV09 $\neq$ 2, Then code $\emptyset$ 10. LF $\bigcirc$ 11. RF $\bigcirc$ 12. LR $\bigcirc$ 13. RR $\bigcirc$ 14. TG/H $\bigcirc$	(9) Unknown if damaged Glazing Damage from Occupant Contact
(0) No door/gate/hatch or door not opened	39. WS 4 40. LF 41. RF 42. LR 43. RR
Door, Tailgate or Hatch Came Open During Collision (1) Door operational (no damage) (2) Latch/striker failure due to damage (3) Hinge failure due to demege (4) Door structure failure due to damage (5) Door support (i.e., piller, sill, roof side rail, etc.) failure due to damage (6) Latch/striker and hinge failure due to damage (8) Other failure (specify):	(0) No glazing (1) No occupent contact to glazing (2) Glazing contected by occupant but no glazing damage (3) Glazing in place and cracked by occupant contact (4) Glazing in place and holed by occupant contact (5) Glazing out-of-place (crecked or not) by occupant contact and not holed by occupant contact (6) Glazing out-of-place by occupant contact (7) Glazing removed prior to accident (8) Glazing disintegrated by occupant (9) Unknown if contacted by occupant

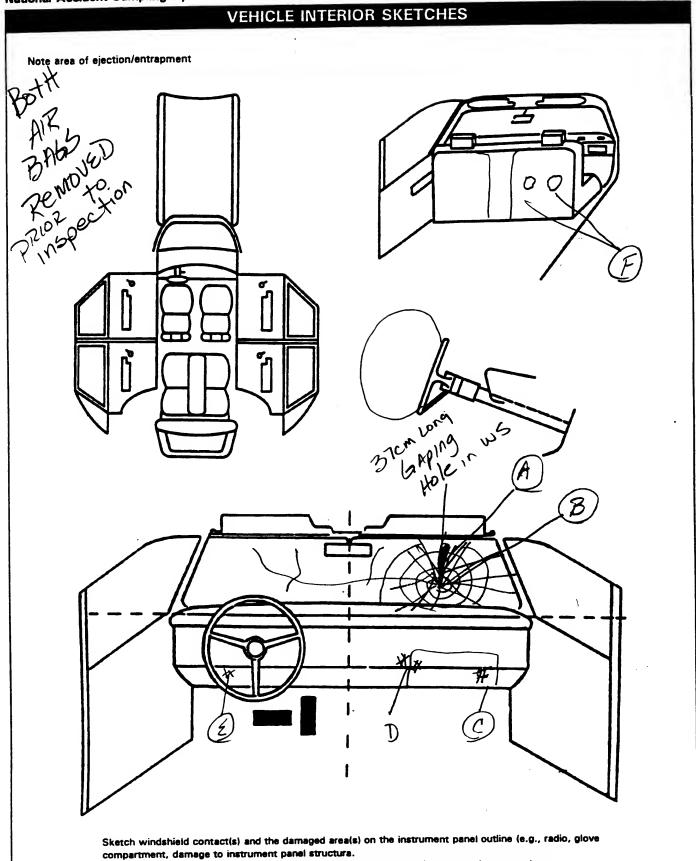


Man-	If no intrusion	o lasvo vecis	bles 11/47-11/	86 blank	INTRUDING COMPONENT
Note:	If no intrusion	S, leave varia	DIES IV 47-IV	oo blank.	MATRICE ME CONTROLLER
	- 1. gish	2. (2.)-		Dominant	Interior Components
	Location of	Intruding			(01) Steering assembly
	Intrusion	Component	of Intrusion	Direction	(02) Instrument panel left
					(03) Instrument panel center
					(04) Instrument panel right
1st	47	48	49	50	(05) Toe pan
					(06) A (A1/A2)-pillar (07) B-pillar
					(O8) C-pillar
		E 2	E 2	E A	(O9) D-pillar
2nd	51	52	_ 53	54	(10) Side panel - forward of the A1/A2-pillar
					(11) Door panel (side)
					(12) Side panel - rear of the B-pillar
3rd	55	56.	57.	58.	(13) Roof (or convertible top)
0.0					(14) Roof side rail
					(15) Windshield
			_	0.2	(16) Windshield header
4th	59	60	61	62. <u> </u>	(17) Window frame
			_		(18) Floor pan (includes sill)
					(19) Backlight header
F.L	63.	64	e E	66	(20) Front seat back
btn	63	<sup>64.</sup> —	_ 65	· · · · · · · · · · · · · · · · · · ·	(21) Second seat back
					(22) Third seat back
					(23) Fourth seat back
6th	67	68.	69.	70.	(24) Fifth seat back
Jui	··				(25) Seat cushion
					(26) Back door/panel (e.g., tailgate)
					(27) Other interior component (specify):
7th	71	72	73	74	
					Exterior Components
					(30) Hood
		70	77	70	(31) Outside surface of this vehicle (specify):
8th	75	/6	_ ′′	/8	(01) Catalag Sarrage of this vernors (openly)
					(32) Other exterior object in the environment
					(specify):
9th	79	80.	81.	82.	(33) Unknown exterior object
• • • • • • • • • • • • • • • • • • • •					(97) Catastrophic
					(98) Intrusion of unlisted component(s)
					(specify):
10th	83	84	85	86	(99) Unknown
I OCA	TION OF INTE	RUSION			MAGNITUDE OF INTRUSION
LUCA	11014 01 11411	1001011			(1) ≥ 3 centimeters but < 8 centimeters
Fro	nt Seat	Fourth	n Seat		(2) ≥ 8 centimeters but < 15 centimeters
	11) Left		) Left		(3) ≥ 15 centimeters but < 30 centimeters
	12) Middle	(42	) Middle		(4) ≥ 30 centimeters but < 46 centimeters
	13) Right	(43	) Right		(5) ≥ 46 centimeters but < 61 centimeters
1					(6) ≥ 61 centimeters
	cond Seat	(97	) Catastrop	nic lacad	(7) Catastrophic
•	21) Left		Other enc		(9) Unknown
	22) Middle		area (spec	ary)	
(	23) Right	100	) Unknown		
Thi	ird Seat	(33	, Chkilowii		DOMINANT CRUSH DIRECTION
	(31) Left				(1) Vertical
	(32) Middle				(2) Longitudinal
	(33) Right		•		(3) Lateral (7) Catastrophic

	(All R	Aeasurements Are in Centime	ters)	
COMPARISON VALUE	_	DAMAGE VALUE	=	DEFORMATION
	_		-	
	-		=	
<i>A</i>	/ō	DEFORM	ATIO	N
	-		=	

.

STEERING COLUMN	INSTRUMENT PANEL
87. Steering Column Type	92. Odometer Reading <u>0 2 3</u> ,000
(1) Fixed column	kilometers
(2) Tilt column (3) Telescoping column	Code to the nearest 1,000 kilometers
(4) Tilt and telescoping column	(000) No odometer (001) Less than 1,500 kilometers
(8) Other column type (specify):	4500 499 500 kilometers or more
(9) Unknown	(999) Unknown 
88. Tilt Steering Column Adjustment	Source: ODOMETER
(0) No tilt steering column	93. Instrument Panel Damage from
(1) Full up (2) Between full up and center	Occupant Contact?  (O) No
(3) Center	(1) Yes
(4) Between center and full down	(9) Unknown
(5) Full down (9) Unknown	94. Type of Knee Bolster Covering
(a) Olikilowii	(0) No knee bolster
89 Telescoping Steering Column Adjustment	(1) Padded
89. Telescoping Steering Column Adjustment (0) No telescoping steering column	(2) Rigid plastic (8) Other (specify):
(1) Full back	(9) Unknown
(2) Between full back and midpoint	as was Determed from
(3) Midpoint (4) Between midpoint and full forward	95. Knee Bolsters Deformed from / Occupant Contact?
(5) Full forward	(0) No knee bolster
(9) Unknown	(1) No deformation (2) Yes - deformation
	(2) Yes - deformation (9) Unknown
90. Steering Rim/Spoke Deformation	
Code actual measured	96. Did Glove Compartment Door Open During Collision(s)?
deformation to the nearest centimeter (OO) No steering rim deformation	(O) No glove compartment door
(01-14) Actual measured value in centimeters	(1) No - door did not open (2) Yes - door opened
(15) 15 centimeters or more (98) Observed deformation cannot be measured	(2) Yes - door opened (9) Unknown
(99) Unknown	$\lambda$
(SS) Chillian	97. Adaptive (Assistive) Driving Equipment (0) No adaptive driving equipment
91. Location of Steering Rim/Spoke	(1) Adaptive driving equipment installed
Deformation	(Check all that apply.)
(00) No steering rim deformation	[] Hand controls for braking/acceleration [] Steering control devices (attached to OEM
Quarter Sections	steering wheel
(01) Section A	[ ] Steering knob attached to steering wheel [ ] Low effort power steering (unit or device)
(O2) Section B	[ ] Replacement steering wheel (i.e., reduced
(03) Section C (04) Section D	diameter)
Lower	[ ] Joy-stick steering controls [ ] Wheelchair tie-downs
Half Sections (05) Upper half of rim/spoke	[] Modification to seat belts (specify):
(06) Lower half of rim/spoke	[ ] Additional or relocated switches (specify):
(07) Left half of rim/spoke	· · · · · · · · · · · · · · · · · · ·
(08) Right half of rim/spoke	[] Raised roof
(09) Complete steering wheel collapse	[ ] Wall-mounted head rest (used behind wheelchair)
(10) Undetermined location (99) Unknown	[ ] Other adaptive device (specify):
(33) Olikilowii	(O) Hakaawa
	(9) Unknown



Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.

Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

		PUII	1	UPANT CONTACT		Confident
Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical E	vidence	Confidence Level of Contact Point
Α	001	02	HEAD	spider web		l l
В	001		7.	AS AIR bAG COMPT	COVER	NA
С	013	02	Knee	Knee scut	4	3
D	013	02	Knee	Kne Black T	eanster.	3
Ε	014	01	Knee	Scuff/Abrasi	20	
F	151	03	Knees	5cuffs		1
G						
Н						
1						
J						
K						
L						
М						
N						
selector ettachmic (008) Celluler tradio (009) Add on a deck, eir control (010) Left instruction (011) Center in below (011) Center in below (013) Glove co (014) Knee bol (015) Windshid more of header, instrume steering side only (016) Windshid more of header, instrume (pesseng (017) Windshid exterior (017)	elephone or CB equipment(e.g., tepe conditioner) rument panel and strument panel and trument penel end empertment door ster eld including one or the following: front A (A1/A2)-pillar, nt penel, mirror, or assembly (driver	(054) Left I (055) Other (056) Left I (057) Left I (058) Left I (059) Left I Included follow sill, A (059) Common sill, A (101) Right (101) Right (102) Right (104) Right (105) Other (106) Right (107) Right (107) Right (108) Right included followill, A (109) Right included follo	r left piller (specify): side window glass side window frame side window elll side window glass ding one or more of the ving: frame, window (A1/A2)-piller, B-piller, of side rail. r left side object lify): side interior eurface, ding hardware or ests eide hardware or est A (A1/A2)-piller	(205) Roof or convertible top FLOOR (251) Floor (including toe pen)	EQUIPMENT (401) Hend controls braking/accel (402) Steering com (ettached to (wheel)) (403) Steering knot steering whe (405) Replacement (i.e., reduced (406) Joy stick ste (407) Wheelchair ti (408) Modification (specify): (409) Additional or switches, (sp (410) Raised roof (411) Wall mounte (used behind (412) Other adaptit (specify):	eration rol devices DEM steering ettached to al steering wheel diameter) ering controls e-downs to seat belts, relocated ecify): d head rest wheel chair)
		( <del>epe</del>	eify):	(252) Floor or console mounted transmission lever, including console (253) Parking brake hendle (254) Foot controls including parking brake	CONFIDENCE LEVE POINT (1) Certain (2) Probable (3) Possible (9) Unknown	EL OF CONTACT

		1				
		M	ANUAL REST	RAINTS		
NOTES	Restraint systems should be	essessed	during the vehicle	inspection then co	oute for the oded on th	e variable may be found below e Occupant Assessment Form.
	If a Child safety seat is prese					
	If the vehicle has automatic r	estraints	available, encode t	he appropriate da	ta on the b	back of the previous page.
			Left	Cent	er	Right
	Availability		4	0		4.
F	Evidence of usage		04			04
<u>l</u>	Used in this crash?	1	04			00
R S	Proper Use		j			0
T	Failure Modes		7			0
	Anchorage Adjustment		4'			2
	Availability		4	1 3	,	4.
•	Evidence of usage	<u> </u>	64	00	)	1 04
S E	Used in this crash?	<del> </del>		<del></del>		
Ē	Proper Use			1		
SECOZO	Failure Modes					
D	Anchorage Adjustment	<del>- </del>				7
	Availability					
_	Evidence of usage					
O T	Used in this crash?					
н	Proper Use					
Ε	Failure Modes					
R						
	Anchorage Adjustment					
	(Active) Belt System Availability	•	se of Manual (Active None used or not a			t Upper Anchorage Adjustment o shoulder belt
	None available Belt removed/destroyed	(O) (1)	Belt used properly	.va.iaure		upper anchorage adjustment for
	Shoulder belt	(2)	Belt used properly	with child safety	sh	oulder beit
	Lap belt Lap end shoulder belt		seat		A	djustable shoulder Belt Upper
	Belt available - type unknown	Belt	Used Improperly		A	nchorage
4-0	and Only Contintly Department	(3) (4)	Shoulder belt worn Shoulder belt worn			full up position mid position
-	<i>ral Belt Partially Destroyed</i> Shoulder belt (lap belt	(-)	seat	Delinica Deck Of		full down position
	destroyed/removed)	(5)	Belt worn around r	nore than one		osition unknown
	Lap beit (shoulder beit destroyed/ramoved)	(6)	person Lan belt worn on a	bdomen		nknown if position has adjustable oper enchorage adjustment
	Other belt (specify):	(7) -			.,	
(9)	Unknown	(8)	seat (specify): Other improper use	of manuel belt		
	(Active) Belt System Use None used, not available, or belt		system (specify):			
(00)	removed/destroyed	(9)	Unknown			. 0 10
(01)	Inoperable (specify):					
(02)	Shoulder belt		(Active) Belt Failure R	Aodes During		
(03)	Lap beit Lap and shoulder beit	Acciden (0)	t No manual belt use	ed or not available		
(05)	Belt used - type unknown	(1)	No manual belt fail	ure(s)		
(08) Other belt used (specify):		(2)	Torn webbing (street not included)	stched webbing		

Broken buckle or latchplate Upper anchorage separated

Other enchorage asparated

Combination of above (specify):

Other manual belt failure (specify):

(specify):

Unknown

Broken retractor

(12) Shoulder belt used with child safety

(13) Lap belt used with child safety seet

(14) Lap and shoulder belt used with

(18) Other belt used with child safety

child safety aeat
(15) Belt used with child safety seat

type unknown

seat (specify):
(99) Unknown if belt used

(3)

(4)

(5)

(6)

(7)

(8)

(9)

		AUTOMATIC RESTRA	NTS	
NOTE	S: Encode the data for each apple below. Restraint systems shaped Assessment Form.		e attribute for the variables m	ay be found n the Occupant
		Left Front	Right Front	Other
F	Availability/Function	7	1	
ł	· · · · · · · · · · · · · · · · · · ·	<u>;</u>	<del>'</del> ,	
R S	Deployment	/		
T	Failure	/	2	<u> </u>
(0) (1) <i>Non-</i>	System Availability/Function Not equipped/not available Air bag functional Air bag disconnected (specify):	Frontal Air Bag System Deployment (This Occupant Position) (0) Not equipped/not available (1) Deployed during accident (as of impact) (2) Deployed inadvertently just p	of impact)	nt Position) an <u>"other"</u> air bag cident (as a result
(9) Are The System (0) (1) (2)	Yes (specify):	accident (3) Deployed, accident sequence undetermined (4) Deployed as a result of a non event during accident sequen (e.g., fire, explosion, electrical Unknown if deployed (7) Nondeployed (9) Unknown	(3) Deployed, details under the collision (4) Deployed as a result noncollision event sequence (e.g., fire	It of a during accident , explosion,
(9)	Unknown	AUTOMATIC BELTS	S	
		Left	Right	
	Availability/Function	$\supset$		
F	Use	0	٥	
R	Туре	2	0	
S	Proper Use	0	0	
Т	Failure Modes		δ	
Availel	atic (Passive) Belt System  Wity/Function  Not equipped/not available	Proper Use of Automatic (Passive) E System (0) Not equipped/not available/no	During Accident	
(1) (2) (3) <i>Non</i> (4) (9)	2 point automatic belts 3 point automatic belts Automatic belts - type unknown -functional Automatic belts destroyed or rendered inoperative Unknown	(1) Automatic belt used properly (2) Automatic belt used properly child safety seat  Automatic Belt Used Improperly (3) Automatic shoulder belt won arm (4) Automatic shoulder belt wor back	(1) No automatic belt with (2) Torn webbing (streincluded) (3) Broken buckle or la (4) Upper anchorage an under (5) Other anchorage an behind (6) Broken retractor (7) Combination of ab	failure(s) atched webbing no atchplate separated eparated (specify): ove (specify):
(0) (1) (2) (3) (9) <b>Auton</b> (0) (1) (2)	Not equipped/not available/destroyed or rendered inoperative Automatic belt in use Automatic belt not in use (manually disconnected, motorized track inoperative) Automatic belt use unknown Unknown  Automatic belt use unknown Unknown  Automatic belt use unknown Unknown  Automatic delt use unknown Unknown  Automatic delt use unknown Unknown  Automatic (Passive) Belt System Type Not equipped/not available Non-motorized system Motorized system Unknown	(5) Automatic belt worn around than one person (6) Lap portion of automatic belt on abdomen (7) Automatic lap and shoulder automatic shoulder belt used improperly with child safety seat (specify):  (8) Other improper use of automatic system (specify):  (9) Unknown	t worn (9) Unknown bett or i	or range (appoil)

### FIRST SEAT FRONTAL AIR BAGS

Encode the applicable data for the driver and first seat passenger in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

	Driver	Passenger
Type of air bag?		
Flaps open at tear points?	2	X
Flaps damaged?		
Air bag damaged?	01	04,07
Source of air bag damage	01	, 88
Air bag tethered?		
Air bag have vent ports?	2	1 8
Other occupant contact air bag?		/
Occupant wearing eyewear?	9	9

### Type of Air Bag

- (0) Not equipped/not available
- (1) Original manufacturer installed system
- (2) Ratrofitted air bag
- (3) Replacement air bag
- (8) Unknown type of air bag
- (9) Unknown

### Did Air Bag Module Cover Flap(s) Open At **Designated Tear Points?**

- (O) Not equipped/not available
- (1) No
- (2) Yas
- (3) Daployed, unknown if flap(s) opened at designated tear points
- (7) Not daployed
- (8) Unknown if daployed
- (9) Unknown

### Were Air Bag Module Cover Flap(s) Damaged?

- (0) Not aquipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if air bag module cover flap(s) damaged
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

### Was There Damage To The Air Bag?

- (00) Not equipped/not available
- (01) Not damaged
- Yes Air Bag Damage
- (02) Ruptured
- (03) Cut
- (04) Torn (05) Holed
- (06) Burned (07) Abraded~
- (88) Other damaga (specify):
- (95) Damaged, details unknown (96) Daployed, unknown if damaged
- (97) Not daployed
- (98) Unknown if deployed
- (99) Unknown

### Source of Air Bag Damage

- (00) Not aquipped/not available
- (01) Not damaged
- (02) Object worn by occupant, (specify):
- (03) Object carried by occupant, (specify):
- (04) Adaptive/assistive controls, (specify):
- (05) Fira in vehicle
- (06) Thermal burns
- (07) Rescue or emergancy efforts
- (88) Other damage source (specify):
  BRACKET SCREWS
- (95) Damaged, unknown source
- (96) Deployed, unknown if damagad
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

#### Was The Air Bag Tethered?

- (0) Not equipped/not available
- (1) No
- Yes (specify number of tethar (2) straps):
- (3) Daployed, unknown if tathered
- (7) Not daployed
- (8) Unknown if deployed
- (9) Unknown

### Did The Air Bag Have Vent Ports?

- (0) Not equipped/not available
- (1) No
- (2) Yas (specify number of vent ports):
- (3) Deployad, unknown if vent ports present
- (7) Not deployed
- Unknown if deployed (8)
- (9) Unknown

### Was the Air Bag in this Occupant's Position Contacted by Another Occupant?

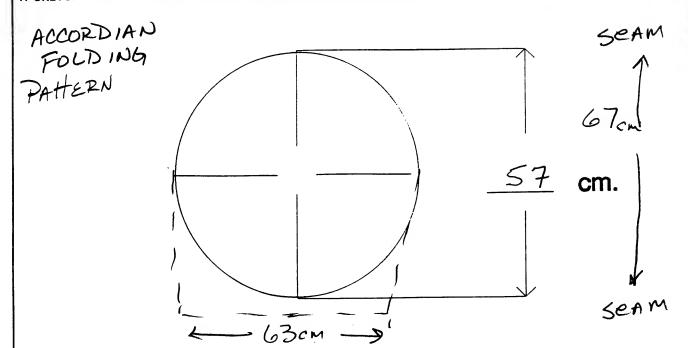
- (0) Not aquipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if other occupant contact to air bag
- Not deployed (7)
- (8) Unknown if deployed
- (9) Unknown

### Was This Occupant Wearing Eye-wear?

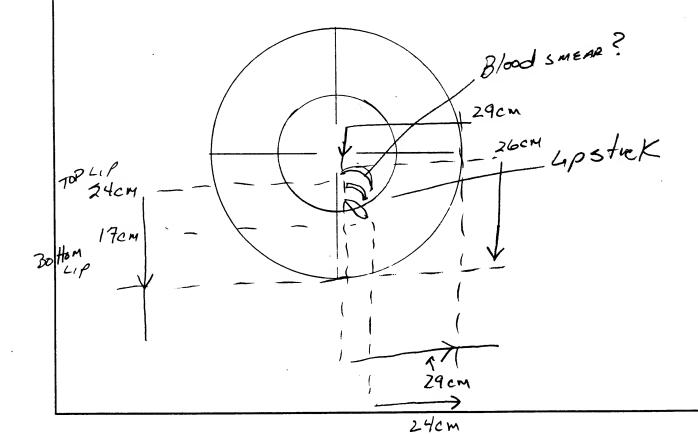
- (0) Not equipped/not available
- (1) No
- (2) Eyeglassas/sunglasses
- Contact lenses (3)
- (4) Deployed, unknown if eyewear worn
- Not deployed (7)
- Unknown if daployed
- (9) Unknown

## DRIVER AIR BAG DAMAGE AND CONTACT SKETCHES

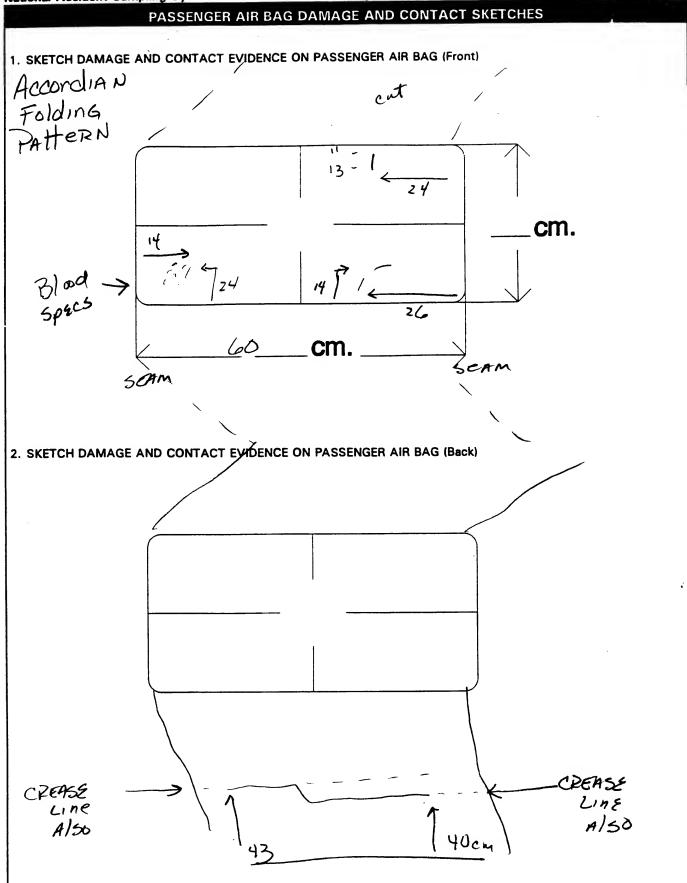
1. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Front)



2. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Back)



DRIVER AIR BAG S	SKETCHES (Cont'd)
3. DRIVER AIR BAG MODULE COVER FLAP SIZE (DOUBLE)  a. Upper Flap  width (W <sub>U</sub> ) 14/2 cm width (W <sub>L</sub> )  height (H <sub>U</sub> ) 13/2 cm height (H <sub>L</sub> )  H,  H,  H,	
4. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE	5. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS
6. SKETCH LOCATION OF CIRCULAR AIR BAG VENT PORTS	Exhaus + Hole DIAM. 3cm



PASSENGER AIR BAC	G SKETCHES (Cont'd)
3. PASSENGER AIR BAG MODULE COVER FLAP SIZE (SINGLE) a. Flap width (W) 35 height (H) 14 H	4. PASSENGER AIR BAG MODULE COVER FLAP SIZE (DOUBLE)  a. Upper Flap  width (Wu)  height (Hu)  Hu  Hu  W  W  Hu  W  W  Hu  Hu  Hu  Hu
5. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE	6. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS
7. SKETCH LOCATION OF RECTANGULAR AIR BAG VENT PORTS  10 11 12 1 2 9	Hole Diam Gem

"OTHER" AIR BAG DAMAGE AND CONTACT SKETCHES
1. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Front)
2. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Back)

	"OTHER" AIR	BAG SKETCHES (Co	ont'd)	
3. SKETCH AIR BAG MODUL	E FLAP AND SIZE OR O	PENING FOR AIRBAG		
4. SKETCH AIR BAG VENT I	PORTS			
4. SKETON AIN BAG VENT				
·				
	•			
1				

## HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspaction then coded on the Occupant Assessment Form.

		Left	Center	Right
	Head Restraint Type/Damage	3		3
_	Seat Type	02		02
F	Seat Performance	1		/
R S	Seat Orientation			
T	Seat Track Position	(0		5
	Seat Back Incline Pre/Post Impact	2.3		23
	Head Restraint Type/Damage	3		3
e	Seat Type	03	03	03
S	Seat Performance		1	
CO	Seat Orientation		1	/
N D	Seat Track Position		1	1
	Seat Back Incline Pre/Post Impact	01	01	0/
	Head Restraint Type/Damage			
Т	Seat Type			
Ĥ	Seat Performance			
Ř D	Seat Orientation			
U	Seat Track Position			
	Seat Back Incline Pre/Post Impact			
	Head Restraint Type/Damage	*		
0 T	Seat Type			
Ĥ	Seat Performance			
E R	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

### HEAD RESTRAINTS/SEAT EVALUATION

Head Restraint Type/Damage by Occupant at This Occupant Position (0) No head restraints

(1) Integral — no damage
 (2) Integral — damaged during accident

(3) Adjustable — no damage(4) Adjustable — damaged during

(4) Adjustable — damaged during accident

(5) Add-on — no damage(6) Add-on — damaged during accident

(8) Other Specify):

(9) Unknown

Seat Type (this Occupant Position)

(00) Occupant not seated or no

(01) Bucket

(02) Bucket with folding back

(03) Bench

(04) Bench with separate back cushions

(05) Bench with folding back(s)

(06) Split bench with separate back cushions

(07) Split bench with folding back(s)

(08) Pedestal (i.e., column supported)

(09) Other seat type (specify):

(10) Box mounted seat (i.e., van type)

(99) Unknown

Seat Performance (this Occupant Position)

(0) Occupant not seated or no seat

(1) No seat performance failure(s)

(2) Seat adjusters failed

(3) Seat back folding locks or "seat back" failed (specify):

(4) Seat tracks/anchors failed

(5) Deformed by impact of occupant

(6) Deformed by passenger compartment intrusion (specify):\_\_\_\_\_

(7) Combination of above (specify):

(8) Other (specify):

(9) Unknown

Seat Orientation (this Occupant Position)

(0) Occupant not seated or no seat

(1) Forward facing seat

(2) Rear facing seat

(3) Side facing seat (inward)

(4) Side facing seat (outward)

(8) Other (specify):

(9) Unknown

Seat Track Adjusted Position Prior To

(0) Occupant not seated or no seat

(1) Non-adjustable seat track

Adjustable Seat Track

(2) Seat at forward most track position (3) Seat between forward most and

middle track positions

(4) Seat at middle track position(5) Seat between middle and rear most track positions

(6) Seat at rear most track position

(9) Unknown

Seat Back Incline Prior and Post Impact

(00) Occupant not seated or no seat

(01) Not adjustable

Upright prior to impact
(11) Moved to completely rearward
position

12) Moved to rearward midrange position

(13) Moved to slightly rearward position

(14) Retained pre-impact position

(15) Moved to slightly forward position

(16) Moved to forward midrange position

(17) Moved to completely forward position

Slightly reclined prior to impact

(21) Moved to completely rearward position

(22) Moved to rearward midrange position

23) Retained pre-impact postion

(24) Moved to upright position

(25) Moved to slightly forward position

(26) Moved to forward midrange position

(27) Moved to completely forward position

Completely reclined prior to impact

(31) Retained pre-impact position

(32) Moved to rearward midrange position

(33) Moved to slightly rearward position

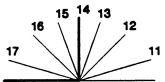
(34) Moved to upright position

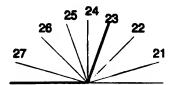
(35) Moved to slightly forward position

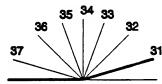
(36) Moved to forward midrange position

(37) Moved to completely forward position

(99) Unknown







Coding diagrams for Seat Back Incline Position Prior and Post Impact

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

Com	EJECTION/ENTRAPMENT DATA  Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped							
in th	in the vehicle. Code the appropriate data on the Occupant Assessment Form.							
	EJECTION No [/] Yes [ ] Describe indications of ejection and body parts involved in partial ejection(s):							
	Occupant Number							
i i	Ejection	+						
	(Note on Vehicle Interior Sketch) Ejection Area							
	Ejection Medium							
	Medium Status							
(2) (3) (9) <b>Ejeci</b> (1) (2) (3) (4) (5)	Complete ejection Partial ejection Ejection, Unknown degree Unknown  ion Area Windshield Left front Right front Left rear	(7) Roof (8) Other area (e.g., back of pickup, etc.) (specify):  (9) Unknown  Ejection Medium (1) Door/hatch/tailgate (2) Nonfixed roof structure (3) Fixed glazing (4) Nonfixed glazing (specify):		(5) Integral structure (8) Other medium (specify):  (9) Unknown  Medium Status (Immediately Prior to Impact) (1) Open (2) Closed (3) Integral structure (9) Unknown				
ENT	RAPMENT No [X] Yes							
	ponent(s):							
(Note	e in vehicle interior diagram)							

		SAFETY SEAT					
When	a child safety seat is present er cupant's number using the co	nter the occupant' des listed below.	s numb Comple	er in the fi ete a colu	irst row and co mn for each o	omplete the col child safety sea	iumn below it present.
Occup	eant Number		14:11				
-	rpe of Child Ifety Seat						
	nild Safety Seat rientation						
	nild Safety Seat arness Usage						
	nild Safety Seat nield Usage						
	nild Safety Seat other Usage						
	nild Safety Seat ake/Model	Sp	ecify B	olow for E	ach Child Saf	ety Seat	
1. Ty	/pe of Child Safety Seat		4.	Child Sa	fety Seat Shie	eld Usage	
	) No child safety seat		5.	Child Sa	fety Seat Teti	her Usage	
, , ,	) infant seat			Note: Op	otions Below	Are Used for V	ariables 3-5
(2) Toddler seat (3) Convertible seat			(00) No child safety seat				
	(4) Booster seat (7) Other type child safety seat (specify):						
			Not Designed with Harness/Shield/Tether (O1) After market harness/shield/tether added, not used				
<ul><li>(8) Unknown child safety seat type</li><li>(9) Unknown if child safety seat used</li></ul>			(O2) After market harness (O3) Child safety seat use			rness/shield/tet t used, but no	ther used after market
	2. Child Safety Seat Orientation		harness/shield/tether added (09) Unknown if harness/shield/te				er
•	O) No child safety seat		added or used				
	esigned for Rear Facing for			Danisan	d Mich Harner	ss/Shield/Tethe	NF.
	his Age/Weight 01) Rear facing			(11) Ha	rness/shield/t	ether not used	••
	(2) Porward facing			(12) Ha	rness/shield/t	ether used	
įc	08) Other orientation (specify)	:		(19) Un	known if harr	ness/shield/teth	ner used
(0	9) Unknown orientation			Unknow	n If Designed	With Harness, ether not used	/Shield/Tetho
	esigned for Forward Facing fo ge/Weight	r This		(22) Ha	rness/shield/t		
(1	11) Rear facing						
(1	2) Forward facing			(99) Ur	known if chil	d safety seat u	Desi
(1	<ul><li>Other orientation (specify)</li></ul>	) <b>:</b>	6	Child Sa	ifety Seat Ma	ke/Modei	
(1	19) Unknown orientation	6. Child Safety Seat Mak (Specify make/model a		and occupant	number)		
A	nknown Design or Orientation ge/Weight, or Unknown Age/	For This Weight					
(2	21) Rear facing						
	22) Forward facing 28) Other orientation (specify)	١٠					
•							
(2	29) Unknown orientation						
	99) Unknown if child safety s						

# Appendix E:

NASS CDS VEHICLE FORMS: VEHICLE #2



National Highway Traffic Safety Administration 12. Speed Limit 1. Primary Sampling Unit Number (000) No statutory limit Code posted or statutory speed limit 2. Case Number - Stratum in kmph 3. Vehicle Number (999) Unknown 30 mph x 1.6093 = 48 kmph **VEHICLE IDENTIFICATION** 4. Vehicle Model Year 13. Police Reported Alcohol Presence For Driver Code the last two digits of the model year (O) No alcohol present (99) Unknown (1) Yes alcohol present (7) Not reported 5. Venicle Make (specify):, (8) No driver present (9) Unknown Applicable codes are found in your NASS Data Collection, Coding and 96 14. Alcohol Test Result For Driver Editing Manual. Code actual value (decimal implied (99) Unknown before first digit - 0.xx) (95) Test refused 6. Vehicle Model (specify): (96) None given (97) AC test performed, results unknown Applicable codes are found in your (98) No driver present NASS Data Collection, Coding and (99) Unknown Editing Manual. Source: YAR (999) Unknown 7. Body Type 15. Police Reported Other Drug Presence For Note: Applicable codes may be found on the back of this page. (0) No other drug(s) present (1) Yes other drug(s) present 8. Vehicle Identification Number (7) Not reported (8) No driver present (9) Unknown Left justify; Slash zeros and letter Z (0 and Z) 16. Other Drug Specimen Test Result For Driver No VIN-Code all zeros Unknown-Code all nines (0) No specimen test given (1) Drug(s) not found in specimen 9. Vehicle Special Use (This Trip) (2) Drug(s) found in specimen, (specify): (0) No special use (1) Taxi (3) Specimen test given, results unknown or not (2) Vehicle used as school bus obtained (3) Vehicle used as other bus (8) No driver present (9) Unknown if specimen test given (4) Military (5) Police (6) Ambulance 17. Driver's Zip Code (7) Fire truck or car (8) Other (specify): (00001) Driver not a resident of U.S. or territories (9) Unknown Code actual 5-digit zip code (99998) No driver present OFFICIAL RECORDS (99999)Unknown 10. Police Reported Vehicle Disposition (0) Not towed due to vehicle damage 18. Driver's Race/Ethnic Origin (1) Towed due to vehicle damage (1) White (non-Hispanic) (9) Unknown (2) Black (non-Hispanic) (3) White (Hispanic) (4) Black (Hispanic) 11. Police Reported Travel Speed (5) American Indian, Eskimo or Aleut Code to the nearest kmph (NOTE: 000 means (6) Asian or Pacific Islander less than 0.5 kmph) (7) Other (specify): (160) 159.5 kmph and above (999) Unknown (8) No driver present (9) Unknown mph X 1.6093 = \_\_\_ kmph

### CODES FOR BODY TYPE

### CDS APPLICABLE VEHICLES

#### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify):
- (09) Unknown automobile type

### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

### Utility Vehicles (≤ 4,500 kgs GVWR)

- (14) Compact utility (Jeep CJ-2 CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

### Van Based Light Trucks (≤ 4,500 kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van (≤ 4,500 kgs GVWR)
- (23) Van based motorhome (≤ 4,500 kgs GVWR)
- (24) Van based school bus (≤ 4,500 kgs GVWR)
- (25) Van based other bus (≤ 4,500 kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify):
- (29) Unknown van type

## Light Conventional Trucks (Pickup style cab, ≤ 4,500 kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

### Other Light Trucks (≤ 4,500 kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van. or light truck)

### OTHER VEHICLES

#### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):
- (59) Unknown bus type

### Medium/Heavy Trucks (> 4,500 kgs GVWR)

- (60) Step van (> 4,500 kgs GVWR)
- (61) Single unit straight truck (4,500 kgs < GVWR ≤ 8,850 kgs)
- (62) Single unit straight truck (8,850 kgs < GVWR ≤ 12,000 kgs)</p>
- (63) Single unit straight truck (> 12,000 kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

## Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify):
- (89) Unknown motored cycle type

### Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

	DDECDACH ENVIRONMENTAL DATA			
	PRECRASH ENVIRONMENTAL DATA	25.	Roadway Surface Condition	1
10	Relation To Interchange Or Junction		(1) Dry	
10.	(0) Non-interchange area and non-junction	n	(2) Wet	
	(1) Interchange area related		(3) Snow or slush	- 1
			(4) Ice	
	Non-Interchange junctions		(5) Sand, dirt, or oil	
	(2) Intersection related		(8) Other (specify):	
	(3) Driveway, alley access related		(9) Unknown	
	(4) Other junction (specify)	i		1
		26.	Light Conditions	
	(5) Unknown type of junction	ŀ	(1) Daylight	
	(O) Hiskneys		(2) Dark	
	(9) Unknown		(3) Dark, but lighted	
			(4) Dawn (5) Dusk	
20.	Trafficway Flow		(9) Unknown	
	(0) Not physically divided (two way traffic)		(9) Chkhown	
	(1) Divided trafficway-median strip without			
	positive barrier	27.	Atmospheric Conditions	
	(2) Divided trafficway-median strip with positive		(0) No adverse atmospheric-related driving	
	barrier		conditions	
	(3) One way traffic		(1) Rain	
	(9) Unknown		(2) Sleet/hail	
			(3) Snow	
21.	Number Of Travel Lanes 2		(4) Fog	
	(1) One		(5) Rain and fog (6) Sleet and fog	
	(2) Two		(7) Other (e.g., smog, smoke, blowing sand o	r
	(3) Three		dust, etc.) (specify):	•
	(4) Four	1	addity citally (appeality).	
	(5) Five		(9) Unknown	
	(6) Six (7) Seven or more			
	(9) Unknown	28.	Traffic Control Device	d
	,	l	(0) No traffic control(s)	
	<b>D</b>		(1) Traffic control signal (not RR crossing)	
22.	Roadway Alignment		Bandatan	
	(1) Straight (2) Curve right	1	Regulatory	
	(3) Curve left	1	(2) Stop sign (3) Yield sign	
	(9) Unknown	1	(4) School zone sign	
	• • • • • • • • • • • • • • • • • • • •	1	(5) Other regulatory sign (specify):	
22	Roadway Profile	1		
23.	(1) Level		(6) Warning sign (not RR crossing)	
7	(2) Uphill grade (>2%)	4	(7) Unknown sign	
	(3) Hill crest		(8) Miscellaneous/other controls including RR	
	(4) Downhill grade (>2%)		controls (specify):	
	(5) Sag		(9) Unknown	
b i	(9) Unknown		(9) Unknown	
		1		
24	Roadway Surface Type	29.	Traffic Control Device Functioning	7
1-4.	(1) Concrete	1	(0) No traffic control device	
	(2) Bituminous (asphalt)		(1) Traffic control device not functioning	
	(3) Brick or block	1	(specify):	
	(4) Slag, gravel, or stone	1	(2) Traffic control device functioning properly	
	(5) Dirt		(9) Unknown	
	(8) Other (specify):	1		
	(9) Unknown	1	•	

	PRECRASH DRIVER RELATED DATA	This Vehicle Traveling
20	Driver's Distraction/Inattention To Driving	(10) Over the lane line on left side of travel lane
30.	(Prior To Recognition Of Critical Event)	(11) Over the lane line on right side of travel lane
	(00) No driver present	(12) Off the edge of the road on the left side
	(01) Attentive or not distracted	(13) Off the edge of the road on the right side
	(O2) Looked but did not see	(14) End departure
	102/ Looked but did not bee	(15) Turning left at intersection
	Distractions	(16) Turning right at intersection
	(03) By other occupant(s), (specify):	(17) Crossing over (passing through) intersection
	100) by other occupantion topoch //	(18) This vehicle decelerating
	(04) By moving object in vehicle (specify):	(19) Unknown travel direction
	to the symboling deposition to the same to proceed the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the same to the	Other Motor Vehicle In Lane
	(05) While talking or listening to cellular phone	(50) Other vehicle stopped
	(specify location and type of phone):	(51) Traveling in same direction with lower steady
	(	speed
	(06) While dialing cellular phone (specify location	(52) Traveling in same direction while decelerating
	and type of phone):	(53) Traveling in same direction with higher speed
		(54) Traveling in opposite direction
	(07) While adjusting climate controls	(55) In crossover
	(08) While adjusting radio, cassette, CD (specify):	(56) Backing
		(59) Unknown travel direction of other motor
	(09) While using other device/object in vehicle	vehicle in lane
	(specify):	Voluble III Idilo
	(10) Sleepy or fell asleep	Other Motor Vehicle Encroaching Into Lane
	(11) Distracted by outside person, object, or event	(60) From adjacent lane (same direction)—over left
	(specify):	lane line
	(12) Eating or drinking	(61) From adjacent lane (same direction)—over right
	(13) Smoking related	lane line
	(97) Distracted/inattentive, details unknown	(62) From opposite direction—over left lane line
	(98) Other, distraction (specify):	(63) From opposite direction—over right lane line
		(64) From parking lane
	(99) Unknown	(65) From crossing street, turning into same
31	Pre-Event Movement (Prior to	direction
	Recognition of Critical Event)	(66) From crossing street, across path
	(00) No driver present	(67) From crossing street, turning into opposite
	(01) Going straight	direction
	(O2) Decelerating in traffic lane	(68) From crossing street, intended path not known
	(03) Accelerating in traffic lane	(70) From driveway, turning into same direction
	(04) Starting in traffic lane	(71) From driveway, across path
	(05) Stopped in traffic lane	(72) From driveway, turning into opposite direction
	(06) Passing or overtaking another vehicle	(73) From driveway, intended path not known
	(07) Disabled or parked in travel lane	(74) From entrance to limited access highway
	(08) Leaving a parking position	(78) Encroachment by other vehicle—details
	(09) Entering a parking position	unknown
	(10) Turning right	
	(11) Turning left	Pedestrian, Pedalcyclist, or Other Nonmotorist
	(12) Making a U-turn	(80) Pedestrian in roadway
	(13) Backing up (other than for parking position)	(81) Pedestrian approaching roadway
	(14) Negotiating a curve	(82) Pedestrian—unknown location
	(15) Changing lanes	(83) Pedalcyclist or other nonmotorist in roadway
	(16) Merging	(specify):
	(17) Successful avoidance maneuver to a previous	(84) Pedalcyclist or other nonmotorist approaching
	critical event	roadway, (specify):
	(97) Other (specify):	(85) Pedalcyclist or other nonmotorist—unknown
		location (specify):
	(99) Unknown	Object on Asject
	Critical Precrash Event	Object or Animal
32.		(87) Animal in roadway
	This Vehicle Loss of Control Due To:	(88) Animal approaching roadway
	(01) Blow out or flat tire	(89) Animal—unknown location (90) Object in roadway
	(02) Stalled engine	(91) Object in roadway  (91) Object approaching roadway
	(O3) Disabling vehicle failure (e.g., wheel fell off)	(92) Object—unknown location
	(specify): (04) Non-disabling vehicle problem (e.g., hood flew	(98) Other critical precrash event (specify):
	up) (specify):	100, Other critical processi event (specify).
	(05) Poor road conditions (puddle, pot hole, ice, etc.)	(99) Unknown
	(specify):	100, Olikilottii
	(06) Traveling too fast for conditions	
	(08) Other cause of control loss (specify):	
	100, Cities cause of control loss (aposity).	

(09) Unknown cause of control loss

33.	Attempted Avoidance Maneuver  (00) No driver present  (01) No avoidance maneuver  (02) Braking (no lockup)  (03) Braking (lockup)  (04) Braking (lockup unknown)  (05) Releasing brakes  (06) Steering left  (07) Steering right  (08) Braking and steering left  (10) Accelerating  (11) Accelerating and steering left  (12) Accelerating and steering right	35. Pre-Impact Location (0) No driver present (1) Stayed in original travel lane (2) Stayed on roadway but left original travel lane (3) Stayed on roadway, not known if left original travel lane (4) Departed roadway (5) Remained off roadway (6) Returned to roadway (7) Entered roadway (9) Unknown
	(98) Other action (specify):	(Note: Applicable codes on back of this
	(99) Unknown	page) (00) No impact
34.	Pre-Impact Stability (0) No driver present (1) Tracking	Code the number of the diagram that best describes the accident circumstance (98) Other accident type (specify):
	(2) Skidding longitudinally—rotation less than 30 degrees	(99) Unknown
	(3) Skidding laterally—clockwise rotation	
	(4) Skidding laterally—counterclockwise rotation	
	(7) Other vehicle loss-of-control (specify):	
!	(9) Precrash stability unknown	
		<u> </u>

STOP HERE IF GV07 DOES NOT EQUAL 01 - 49

Cate	Configur-	ACCIDENT TYPES (Includes Inter	nti	
	A Right Roadside Departure	DRIVE OFF CONTROL/ AVOID COLLINGOAD TRACTION LOSS WITH VEH		
Single Driver	B Left Roadside Departure	DRIVE OFF CONTROL AVOID COLL WITH VEH	ISION SPECI	
-	C Forward Impact	PARKED VEH. STA. OBJECT PEDESTRIAN/ ANIMAL DEPA	14 15 SPECI	_
ucii Arm.	D Rear-End	20 21 24 25 28 28 27 27 28 28 27 27 28 28 27 28 28 27 28 28 28 29 29 29 29 29 29 29 29 29 29 29 29 29	JEAC JI SPECI OTHE	
II Sane Trafficway Sane Direction	E Forward Impact	CONTROL/ TRACTION LOSS CONTROL/ TRACTION LOSS CONTROL/ TRACTION LOSS WITH VEH.	AVOID COLLISION WITH OBJECT	SPECIFICS SPECIFICS OTHER UNKNOWN
_	F Sideswipe Angle	44 45 46 (EACH SPECIFIC OTHER		(EACH • 49) SPECIFICS UNKNOWN
4) Inm	G Head-On	1 CAUTTO	H • 53) IPICS UNKNOWN	
Saine Traificway Oppiesie Direction	H Forward Impact	CONTROL/ TRACTION LOSS TRACTION LOSS WITH VEH.	AVOID COLLISION WITH OBJECT	(EACH • 62)(EACH • 63)  SPECIFICS EPECIFICS OTHER UNKNOWN
=	l Sideswiper Angle	SPECIFICS SPEC	CH • 67) HPICS UNKNOWN	
Change Trafficway Vehicle Turning	J. Turn Across Path	MITIAL OPPOSITE INITIAL SAME DIRECTIONS DIRECTIONS		EACH • 74) (EACH • 75)  EPECIFICS SPECIFICS OTHER UNKNOWN
1V Change Trafficw Vehicle Turning	K Turn Into Path	TURN INTO SAME DIRECTION TURN INTO DPPOSIT	27/22	(EACH • 84) (EACH • 85)  SPECIFICS SPECIFICS UNKNOWN
V Intersect ing Paths (Vehicle Damage)	L. Straight Paths	10 art		(EACH - 91) SPECIPICS UNKNOWN
Vi Miscel	M. Backing Etc	OR OBJECT 98	Other Accident T Unknown Accide No Impect	

OCCUPANT RELATED	44. Vehicle Cargo Weight O, O 1 0
37. Driver Presence in Vehicle (0) Driver not present (1) Driver present (9) Unknown	Code weight to nearest  10 kilograms.  (000) Less than 5 kilograms  (450) 4,500 kilograms or more  (999) Unknown
38. Number of Occupants This Vehicle (00-96) Code actual number of occupants for this vehicle (97) 97 or more (99) Unknown	Source:  ROLLOVER DATA  45. Rollover
39. Number of Occupant Forms Submitted	(00) No rollover (no overturning)
AIR BAG RELATED  40. Is this an AOPS Vehicle? (0) No (includes unknown) (1) Yes - researcher determined (2) VIN determined air bag system (3) VIN determined air bag and automatic (passive) belts (4) VIN determined air bag and automatic (passive) belts (4) VIN determined air bag and automatic (passive) belts  41. Air Bag(s) Deployment, First Seat Frontal (0) Not equipped or not available (1) No air bags deployed (3) Driver air bag deployed (3) Driver air bag deployed (4) Driver side only deployed (5) Passenger side only deployed (6) Driver and passenger side deployed (7) Driver and passenger side unknown if deployed (8) Air bag(s) deployed, details unknown (9) Unknown  42. Air Bag(s) Deployment, Other Than First Seat Frontal (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed	Rollover (primarily about the longitudinal axis)  (01-16) Code the number of quarter turns
(7) Nondeployed (9) Unknown  Specify type of "other" air bag present:  VEHICLE WEIGHT ITEMS	(2) Side plane (3) End plane (4) Undercarriage (5) Other location on vehicle (specify): (6) Non-contact rollover forces (specify): (8) Rolloverend-over-end
VEHICLE WEIGHT TIEWS	(9) Unknown
43. Vehicle Curb Weight  Code weight to nearest  10 kilograms.  (045) Less than 450 kilograms  (610) 6,100 kilograms or more  (999) Unknown  3.029 lbs x.4536 = 1,374 kgs  Source: B6 BRAN hams	50. Direction of Initial Roll (0) No rollover (1) Roll right - primarily about the longitudinal axis (2) Roll left - primarily about the longitudinal axis (8) Rolloverend-over-end (9) Unknown roll direction
185 Auto Nows	

OVERRIDE/UNDERRIDE (THIS VEHICLE)	ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V
51. Front Override/Underride (this Vehicle)  52. Rear Override/Underride (this Vehicle)  (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride  Override (see specific CDC)  [Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]  (1) 1st CDC  (2) 2nd CDC  (3) Other not automated CDC (specify):  Underride (see specific CDC)  [Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]  (4) 1st CDC  (5) 2nd CDC  (6) Other not automated CDC (specify):	HIGHEST DELTA V  58. Basis for Total (Resultant) Delta V (highest)  (00) No vehicle inspection  Delta V Calculated (01) Reconstruction program -damage only routine (02) Reconstruction program -damage and trajectory routine (03) Missing vehicle algorithm  Delta V Not Calculated (04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
<ul> <li>(7) Medium/heavy truck or bus override (of any configuration)</li> <li>(9) Unknown</li> <li>HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V</li> </ul>	All vehicles within scope (CDC applicable) of reconstuction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy
Values: (000)-(359) Code actual value (997) Noncollision (998) Impact with object (999) Unknown  53. Heading Angle For This Vehicle	of damage data.  (05) Rollover (06) Other non-horizontal forces (07) Sideswipe type damage (08) Severe override (09) Yielding object
54. Heading Angle For Other Vehicle 270  RECONSTRUCTION DATA	(10) Overlapping damage (11) All vehicle and collision conditions are within
55.Towed Trailing Unit (0) No towed unit (1) Yes—towed trailing unit (9) Unknown	scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify):
56. Documentation of Trajectory Data for This Vehicle (0) No (1) Yes	(98) Other, (specify):
57. Post Collision Condition of Tree or Pole (For Highest Delta V) (O) Not collision (for highest delta V) with tree or pole (1) Not damaged (2) Cracked/sheared (3) Tilted <45 degrees (4) Tilted ≥45 degrees (5) Uprooted tree (6) Separated pole from base (7) Pole replaced (8) Other (specify):	

COMPUTER GENERAT	ED CRASH SEVERITY
59. Total Delta V	Highest  998  Nearest kmph (highest)  Nearest kmph (secondary)  (NOTE: 000 means less than 0.5 kmph) (160) 159.5 kmph and above (998) Trajectory algorithm not run (999) Unknown  DELTA V CONFIDENCE LEVEL  64. Confidence In Reconstruction Program Results (For Highest Delta V) (0) No reconstruction (1) Collision fits model — results appear reasonable (2) Collision fits model — results appear low (3) Collision fits model — results appear reasonable
61. Lateral Component of Delta V O 26	OTHER SPEED ESTIMATE Highest
+ 26 Nearest kmph (highest)  Nearest kmph (secondary)  (NOTE:000 means greater than -0.5 kmph and less than +0.5 kmph) (±160) ±159.5 kmph and above (_999) Unknown  62. Energy Absorption  5/594 Nearest 100 joules (highest)  Nearest 100 joules (secondary)  (NOTE: 0000 means less than 50 joules) (9997) 999,650 joules or more (9999) Unknown	65. Barrier Equivalent Speed  30 Nearest kmph (highest)  Nearest kmph (secondary)  (NOTE: 000 means less than 0.5 kmph) (160) 159.5 kmph and above (999) Unknown
IS MISSING VEHICLE ALGORITHM APPLICA	ABLE FOR THIS VEHICLE? [ ] YES [X] NO

IF YES: IS A COMPLETED PROGRAM SUMMARY INCLUDED? [ ] YES [ ] NO

ESTIMATED DELTA V	VEHICLE INSPECTION
66. Estimated Highest Delta V (Researcher Determined) (0) Reconstruction Delta V coded  Estimated Delta V (1) Less than 10 kmph (2) ≥ 10 kmph but < 25 kmph (3) ≥ 25 kmph but < 40 kmph (4) ≥ 40 kmph but < 55 kmph (5) ≥ 55 kmph  Other estimates of damage severity (6) Minor (7) Moderate (8) Severe (9) Unknown	67. Type of Vehicle Inspection (0) No inspection (1) Vehicle fully repaired-no damage evident (2) Partial inspection (specify):  (3) Complete inspection

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67=0), \*\*\*

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,

OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.



U.S. Department of Transportation

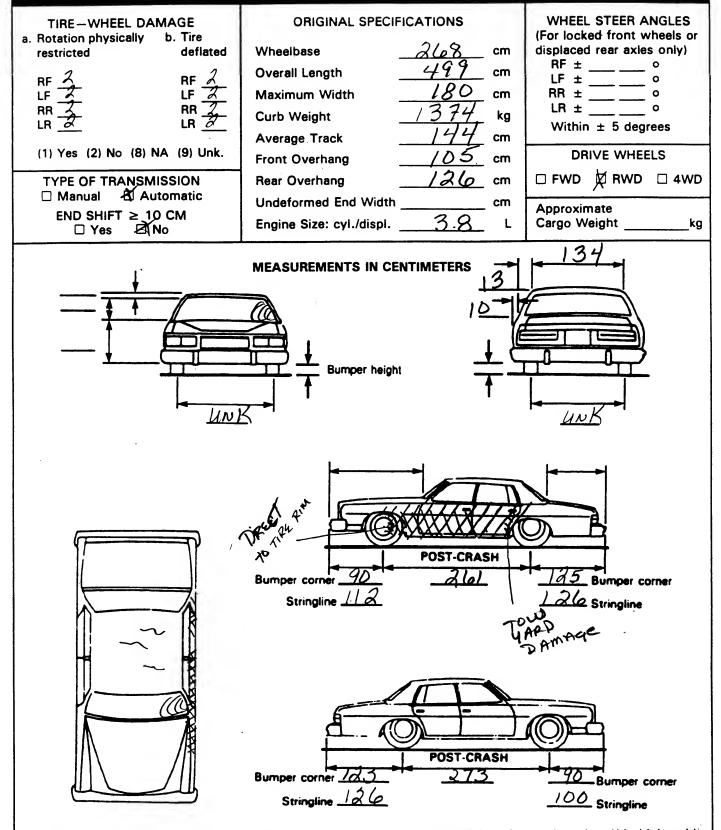
1. Primary Sampling Unit Number 2. Case Number - Stratum  VEHICLE IDENTIFICATION  VIN _ F A B P 3 9 3 X F G	Vehicle Make (specify): FORD Vehicle Model (specify): CTD  Locator Make (specify): FORD Vehicle Model (specify): CTD  Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific Impact No. Location of Direct Damage Location of Field L Location of Max Crush  O) 17cm Dohnn DF Axle between 5111 And bethink C - Y  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements	National High	vay Traffic Safety	E	CTERIOR	VEHI	CLE F	ORM	NA	CRASH	CCIDENT WORTHIN		
Vehicle Make (specify): FORD Vehicle Model (specify): CTD  LOCATOR  Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific impact No. Location of Direct Damage Location of Field L Location of Max Crush  O) 17cm Dr.hind DF Axle between 5111 And Bettline C-Y  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements  Plane of Impact C-Measurements  Width Max CCDC Crush L C1 C2 C3 C4 C5 C6 ±D  NOTES: C5 C6 ±D  NOTES: C7 C7 C7 C7 C7 C7 C7 C7 C7 C7 C7 C7 C7	Vehicle Make (specify): FORD Vehicle Model (specify): CTD  LOCATOR  Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific Impact No. Location of Direct Damage Location of Field L Location of Max Crush  O) 17cm Mohind DF Axle between 5111 And bettling C-Y  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements  Plane of Impact C-Measurements  Width Max (CDC) Crush L C1 C2 C3 C4 C5 C6 ±D  D) 10 10 10 10 11 2 15 3 6 2 52 8 10 35 36 19 0 +60			mber	<u></u>	$\frac{O}{7}$ 3	. Vehicl	e Numb	er				2
Vehicle Make (specify): FORD Vehicle Model (specify): LTD  LOCATOR  Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific Impact No. Location of Direct Damage Location of Field L Location of Max Crush  O) 17Cm Mchind DF Axle Defween 5111 And Beltlins C - Y  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements  Width Max (CDC) Crush L C1 C2 C3 C4 C6 C6 C6 ±D  Direct Damage Width Max (CDC) Crush L C1 C2 C3 C4 C6 C6 C6 ±D  DI 10 P A 5 111 2 15 3 6 252 0 10 35 36 19 0 +60	Vehicle Make (specify): FORD Vehicle Model (specify): LTD  LOCATOR  Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific Impact No. Location of Direct Damage Location of Field L Location of Max Crush  O) 17cm Dchind DF Avle Detween 5ill and Bettline C-Y  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements  Plane of Impact C-Measurements  Width Max (CDC) Crush L C1 C2 C3 C4 C5 C6 ±D  Direct Damage Field C1 C2 C3 C4 C5 C6 ±D  Direct Damage Field C7 C2 C3 C4 C5 C6 ±D	2. Case	Number - Stratum		<u> </u>	1							
Vehicle Make (specify): FORD Vehicle Model (specify): LTD  LOCATOR  Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific Impact No. Location of Direct Damage Location of Field L Location of Max Crush  O) 17cm Diching Dir Axle Deflucen 5:11 And Belfling C-Y  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements    Direct Damage   Direct Damage   C1   C2   C3   C4   C6   C6   C6   ± D	Vehicle Make (specify): FORD Vehicle Model (specify): LTD  LOCATOR  Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific Impact No. Location of Direct Damage Location of Field L Location of Max Crush  O] I7cm Dchind DF Axle Defucen 511 And Beltlins C-Y  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements Width Max (CDC) Crush L C1 C2 C3 C4 C6 C6 ± D  ToP of 5111 215 36 252 8 10 35 36 79 0 +66				VEHICLE	IDENTI	FICAT	ION					
LOCATOR  Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific Impact No. Location of Direct Damage Location of Field L Location of Max Crush  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements   Direct Damage   Width   Max   CDC   Crush   C1   C2   C3   C4   C6   C6   ± D   C7   C9   C9   C9   C9   C9   C9   C9	Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific Impact No.  Location of Direct Damage  Location of Field L  Location of Max Crush  O)  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements  Width Max (CDC) Crush L C1 C2 C3 C4 C5 C6 ± D  To to A 5 1 1 2 15 3 6 2 52 0 10 35 3 6 19 0 + 6	VIN			BXF	<u>G</u> _					Model Y	/ear	35
CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements Width Max (CDC) Crush L C1 C2 C3 C4 C5 C6 ±D  The A 5111 215 36 252 5 1D 35 36 79 0 +66	Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.  Specific Impact No.  Location of Direct Damage  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements  Width Max (CDC) Crush  L C1 C2 C3 C4 C5 C6 ± D  TO TO TO TO TO TO TO TO TO TO TO TO TO T	Vehicle M	ake (specify):	FORD			Vehicle	Model (	specify):		.TT	)	
Specific Impact No. Location of Direct Damage Location of Field L Location of Max Crush  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements  Plane of Impact C-Measurements  Width Max (CDC) Crush L C1 C2 C3 C4 C5 C6 ± D  Width Max (CDC) Crush L C1 C2 C3 C4 C5 C6 ± D  ### Direct Damage Width Max (CDC) Crush L C1 C2 C3 C4 C5 C6 C6 ± D  #### DIRECT Damage Width Max (CDC) Crush L C1 C2 C3 C4 C5 C6 C6 ± D  ##################################	Specific Impact No. Location of Direct Damage Location of Field L Location of Max Crush  CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements  Plane of Impact C-Measurements  Width Max (CDC) Crush  Field C1 C2 C3 C4 C5 C6 ± D  ### Direct Damage Width Max (CDC) Crush  ### Direct Damage Width Max (CDC) CTUSH  ### Direct Damage CDC CTUSH  ### Direct Damage CDC CTUSH  ### Direct Damage CDC CTUSH  ### DIRECT Damage CDC CTUSH  ### DIRECT Damage CDC CTUSH  ### DIRECT Damage CDC CTUSH  ### DIRECT Damage CDC CTUSH  ### DIRECT Damage CDC CTUSH  ### DIRECT Damage CDC CTUSH  ### DIRECT DAMAGE CTUSH  ### DIRECT DAMAGE CTUSH  ### DIR				L	OCATO	R						
CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements   Direct Damage   Width   Max (CDC)   Crush   L   C1   C2   C3   C4   C5   C6   ± D   T0   T0   T0   T0   T0   T0   T0	CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements				ct to the ve	hicle Ion	gitudina	l center	line or t	oumper (	corner fo	or end i	mpacts
CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements      Plane of Impact C-Measurements	CRUSH PROFILE IN CENTIMETERS  NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact Number  Plane of Impact C-Measurements  Width Max (CDC) Trush  L C1 C2 C3 C4 C5 C6 ±D  ### Direct Damage Field C1 C2 C3 C4 C5 C6 ±D  #### Driver Damage Field C1 C2 C3 C4 C5 C6 C6 ±D  ###################################	Specific Imp	act No. Location of	of Direct Dama	ige		Location	of Field	L	1	ocation o	f Max Cr	ush
NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements	NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements	01	17cm bet	and DA	Axle	betwe	en 5	ill And	d belt	line	<u> </u>	-4	
NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements	NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements												
NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements	NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).  Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.  Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.  Use as many lines/columns as necessary to describe each damage profile.  Specific Impact C-Measurements			CRU	SH PROF	ILE IN	CENTI	VIETER	S				
Impact Number         Plane of Impact C-Measurements         Width (CDC)         Max Crush         Field L         C1         C2         C3         C4         C5         C6         ±D           01         10         40         31         215         36         252         0         10         35         36         19         0         +6	Impact Number         Plane of Impact C-Measurements         Width (CDC)         Max Crush         Field L         C1         C2         C3         C4         C5         C6         ±D           01         16P of 3111         215         36         252         0         10         35         36         19         0         +6	i 1 1	mpacts. Free space value is c the individual C locat side taper, etc. Rec	defined as t tions. This ord the valu	he distance may includ ie for each necessary to	betweer e the fol C-measu	n the ba lowing: irement	seline a bumper and ma	and the or lead, be eximum or	original l umper t	oody co	ntour ta	
01 108 of 5111 215 36 252 0 10 35 36 19 0 +6	01 108 of 5111 215 36 252 8 10 35 36 19 0 +6	Impact		Width	Max	1	C,	C,	C3	C.	C <sub>5</sub>	C <sub>6</sub>	±D
NO FILLS SPACE	NO FILL SPACE	01			36	252	Ŏ	10	35	36	19	0	16
			NO THEE SPACE			<del> </del>							
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# ORIGINAL SPECIFICATIONS WORK SHEET

105.6 inches x 2.54 = 268 cm Wheelbase  $196.5 \text{ inches } \times 2.54 = 499 \text{ cm}$ Overall Length  $\frac{7}{2} = \frac{7}{4} = \frac{180}{95}$  inches x 2.54 =  $\frac{180}{95} = \frac{1}{95}$ Maximum Width  $\frac{3, 0 29}{56.6} \text{ pounds x } 0.4536 = 1, 3 7 3 \text{ kg}$  57.0 56.8 inches x 2.54 = 144.3 cm**Curb Weight Average Track** inches x 2.54 =  $\frac{105}{100}$  cm **Front Overhang** Rear Overhang \_\_\_\_\_\_ inches x 2.54 = \_\_\_\_\_\_ **Undeformed End Width**  $\underline{\phantom{a}} \quad \underline{\phantom{a}} \quad \mathbf{cc} \quad \mathbf{x} \quad \mathbf{0.001} \quad = \quad \underline{\mathbf{3.8}} \quad \mathbf{L}$ Engine Size: cyl/displ.  $\frac{2}{2}$   $\frac{3}{2}$  CID x 0.0164 = 3.8 L Vb 5-possengers, 4-doors 

Special Crash Investigation Addendum
Submodel Designation: {specify} LID Color: {specify} GRAY Repair Cost: \$
Transmission: {circle} (Automatic   Manual   Speed: 3-speed   4-speed   5-speed   Other:
Steering: {circle} Power-assisted   Manual Type: rack-and-pinion   worm-and-gear   Other
{please describe}:
Brakes: {circle} Power-assisted Manual Type: 4-wheel disc 4-wheel drum   4-wheel hydraulic   front disc, rear drum   Other:
Observed Defects: {specify}
Fleet Type: {circle} Private vehicle   Rental vehicle   Leased vehicle   Commercial vehicle   Other
{please describe}.

VEHICLE DAMAGE SKETCH



NOTES: Sketch new parimeter end cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the eccident (e.g., gress in tire bead, direction of striations, scuff on sidewells, etc.). If pulling treiler, sketch type of treiler and demage received on the back of this page.

Annotate any damage caused by extrication such as component ramoval by torching, prying, or hydraulic sheers.

Type of Body	The Americ	an Road, <b>≝</b>			48121	
Pass. Cap.	Model	O'r-all Longth	Ship. WL	Cu. Ft. Vol.	Factory List Pr.	Factory Del'd Pr.
1984						
984 Optional Equip.: M	untong GT, LTD	Sedans & St	ation Wag	en .		
		Ship.	Fact.	Mustan		LTD
73 Al- 0 AM A		Wgt.	List	<b>e</b> t	Sedans	Wago
573 Air Conditioner—Aut 570 Defroster, Elec., Res	r Wind.	58 2	809 140	NA E	· E	E
923 Glass linted (Comp	olete)		i 10	È	Ē	Ε
963 Lock GroupPower	- 101	6	254	177	E	Ē
547 Luggage Rack—Stati 584 Radio—AM/FM Stere	on wagon	8 6	126 109	NA E	NA E	E
525 Speed Control, Finga		3	176	Ē	Ē	Ε
53A Seet, PowerSingle	Control	40	224	NA.	Ē	E
520 Tilt Steering Wheel 64P Power Windows		16	110 272	E 198	E	E
422 Callf. Emission Syste	нт	2	99	E	Ē	Ē
1985						
Ford EXP & Exc	ort Series (4-C	vi. 97.6 CID-	-1.6 L	2-bbl. Carb.)	Oct. 4, 1984	
Bore & Strok	a 3.15"x3.13";	Tax. H.P. 15	.88; P.D.	97.6 cu. ln.	(1.6 Liter)	
EXP Series—94.2" w.b. 2-Ps. 3-dr. Sport Coupe 6	7D 300A	170.3"	2.095	327.9	\$7,020.00	\$7,020.0
Ps. 3-dr. Luxurp Cpe. 6	70 301A	170.3"	2,116	327.9	7,908.00	7,908.0
EXP Series—94.2" w.b.	(1.6 Liter Gas	Eng. with EFI	, Turbe)			
Ps. 3-dr. Turbo Coupe (		170.3"	2,135	327.9	\$10,320.00	\$10,320.0
Escort Series-94.2" W.	b.	1 /002 /4330	41B 6/4	end Tonna	Manual\	
Base Fuel Sever (FS) 1. I-Ps. 2-dr. Hatchbeck 611		166.8"	41F (W/4	- <b>398.</b>   1969.   339.1	, <b>Manual</b> ) \$5,928.00	\$5,928.0
4-Ps. 4-dr. Hatchback 58	D P13	166.8"		339.1	6,135.00	6,135.
Escert L Series with 4-	Spd. Margred Tr	ons. (Eng. 99	12)			
4-Ps. 2-dr. Hatchback 61	D P04	166.8"	1,977	339.1	\$6,184.00	\$6,184.0
4-Ps. 4-dr. Hatchbeck 58 4-Ps. 4-dr. 2-st. Sta. Wa		166.8" 165.0"	2,042 2,069	339.1 335.4	6,399.00 6,613.00	6,399. 6,613.
Escort GL-4-Spd. Mam			_,000		0,000.00	5,020.
4-Ps. 2-dr. Hatchback 61	D/CVB PO5	166.8"	2,045	339.1	\$6,682.00	\$6,682.
4-Ps. 4-dr. Hatchbeck 58 4-Ps. 4-dr. 2-st. Wag. 74	D/CVB P14 D/CVB P10	166.8″ 165.0″	2,210 2,139	339.1 335.4	6,896.00 7,073.00	6,896.0 7,073.0
Escort LX-Electronic F						7,073.
4-Ps. 4-dr. Hatchback 58	D/BYB P15	166.8"	2.162	339.1	\$8,148.00	\$8,148.6
4-Ps. 4-dr. 2-st. Wag. 74		165.0″	2,162 2,185	335.4	8,239.00	8,239.
Escert GT-with EFI and						
4·Ps. 2·dr. Hatchback 61	· ·	166.8"	2,127	339.1	\$7,893.00	\$7,893.
Escart—Turbo GT—5-Sp 4-Ps. 2-dr. Turbo Hatchb	ack P07/935	166.8"	NA NA	339.1	\$8,988.00	\$8,988.
Engine (Gas): 4-cy	1. 97.6 cu. In	1.6 L., 2-1	bl. carb.,	indine, trer	naverse, comp	. ratio 9
Engine (Gas): 4-cy to 1, net bhp. 70 at 4 Trans. (MTXI), fuel tank	600 rpm., net	torque 88 at	2600 ft.	/lbs., single	exheust, Mei	tual 4-Sp
	12V-310 ampe	. 60 min. res	900613 3	Trees Delred	NBO(81, 30 10	. pressu
manual steering, Batter		•				
menual steering, Battery		Ship	1	ect.	EXP	_
menual steering, Better) 1985 EXP & Escort Opti		-				Eaco
menual sacering, Bettory 1985 EXP & Escort Opti Enginee:		Wgt.		List \$558		
menual seering, Batter) 1985 EXP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel		Wgt. 230		List \$558 46	NA E	È
manual seering, Battery 1985 EXP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Calif. Emission System 445 5-Spd. Manual Tran:	<b>8</b> .	Wgt. 230 1 10		\$558 46 76	NA E S	Ē
menual sasering, Battery 1985 EXP & Escert Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Cellf. Emission System 445 5-Spd. Menual Tran- 440 Split Torqua Auto. T	<b>8</b> .	Wgt. 230 1 10 84		\$558 46 76 439	NA E S 363	Ē
menual seering, Battery 1985 EXP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Celif. Emission System 445 5-Spd. Menual Tran- 440 Split Torqua Auto. T 572 Air Cond., Manual 582 Radio, AM	<b>8</b> .	Wgt. 230 1 10 84 47 7		\$558 46 76 439 643 39	NA E S 363	EEEE
menual seering, Battery 1985 EXP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Calif. Emission System 445 5-Spd. Manual Tran- 440 Split Torqua Auto. T 572 Air Cond., Manual 521 Radio, AM 210 Roof, Filp-Up/Sun	<b>8</b> .	Wgt. 230 1 10 84 47 7 21		\$558 46 76 439 643 39 315	NA E S 363	
menual seering, Battery 1985 EXP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Cellf. Emission System 445 5-Spd. Manual Tran 440 Split Torque Auto. T 572 Air Cond., Manual 582 Radio, AM 210 Roof, Filp-Up/Sun 525 Speed Control	<b>8</b> .	Wgt. 230 1 10 84 47 7 21		\$558 46 76 439 643 39 315	NA E S 363	
menual seering, Battery 1985 EXP & Escort Opti Engines: 9914-61. 2.0 L. Diesel Calif. Emission System 445 5-Spd. Manual Tran- 440 Split Torqua Auto. T 572 Air Cond., Manual 582 Radio, AM 210 Roof, Flip-Up/Sun 525 Speed Control 524 Power Steering (1) 552 Brattes, Power Front	s. rens. Disc	Wgt. 230 1 10 84 47 7 21 4 8		\$558 46 76 439 643 39 315 176 215 95	NA E S 363 E E E E E S	EEEEEEE
menual seering, Battery 1985 EXP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Cellf. Emission System 445 5-Spd. Manual Tran- 445 5-Spd. Manual Tran- 572 Air Cond., Manual 582 Radio, AM 210 Roof, Filp-Up/Sun 525 Speed Control 52H Power Steering (1) 552 Brakes, Power Front 52Q Steering Wheel, Tilt 52Q Steering Wheel, Tilt 52Q Steering Wheel, Tilt	s. rans. Disc	Wgt. 230 1 10 84 47 7 21 4 8		\$558 46 76 439 643 39 315 176 215 95	N	
menual seering, Battery 1985 EXP & Escort Opti Engines: 9914-4-Cyl. 2.0 L. Diesel Cellf. Emission System 445 5-Spd. Menual Tran- 440 Split Torqua Auto. T 572 Air Cond., Manual 582 Radio, AM 210 Roof, Filp-Up/Sun 525 Speed Control 524 Power Steering (1) 552 Brates, Power Front	s. rans. Disc	Wgt. 230 1 10 84 47 7 21 4 8 4		\$558 46 76 439 643 315 176 215 95 104	N	
menual steering, Battery 1985 EUP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Cellf. Emission System 445 5-Spd. Menual Tran- 572 Air Cond., Manual 21C Roof, Filp-Up/Sun 525 Speed Control 52H Power Steering (1) 552 Brakes, Power Front 520 Steering Wheel, Tilt 548 Luggage Rack, Dix. 184 Console 570 Defroster, Reer Win 1870 Defroster, Reer Win	s. rans. Disc (S.W.)	Wgf. 230 1 10 84 47 7 21 4 8 4 6 12 5		\$558 46 76 439 643 39 315 176 215 95 104 100 1111	NA	
menual seering, Battery 1985 EXP & Escort Opti Engines: 9914-64. Cyl. 2.0 L. Diesel Calif. Emission System 445 5-Spd. Manual Tran- 445 5-Spd. Manual Tran- 445 5-Spd. Manual Sell Sell Torqua Auto. T 572 Air Cond., Manual 582 Radio, AM 210 Roof, Flip-Up/Sun 525 Speed Control 524 Power Steering (1) 552 Brakes, Power Front 520 Steering Wheel, Tilt 548 Luggage Rack, Dix. 184 Console 570 Defroster, Rear Win 523 Glass—Tintad, Com	s. rans. Disc (S.W.) dow	Wgf. 230 1 10 84 47 7 21 4 8 4 6 12 5 1		\$558 46 76 439 643 39 315 176 2215 95 104 1100 111 130	NA E S 363 E S E E E S E NA S E	
menual seering, Battery 1985 EXP & Escort Opti Enginee: 99H 4-Cyl. 2.0 L. Diesel Calif. Emission System 445 5-Spd. Menual Tran- 445 5-Spd. Manual Tran- 572 Air Cond., Manual 210 Roof, Filp-Up/Sun 525 Speed Control 52H Power Steering (1) 552 Brakes, Power Front 520 Steering Wheel, Tilt 548 Luggage Rack, Dtx. 184 Console 570 Defroster, Reer Win 1870 Defroster, Reer Win	s. rans.  Disc (S.W.)  dow plete r Window	Wgf. 230 1 10 84 47 7 21 4 8 4 6 12 5		\$558 46 76 439 643 39 315 176 215 95 104 100 1111	NA	
menual seering, Battery 1985 EXP & Escort Opti Enginee: 9914 4-Cyl. 2.0 L. Diesel Callif. Emission System 445 5-Spd. Menual Train- 572 Air Cond., Manual 21C Roof, Filp-Up/Sun 525 Speed Control 52H Power Steering (1) 525 Brakes, Power Front 529 Steering Wheel, Tilt 548 Luggage Rack, Dix. 184 Console 570 Defroster, Rear Win 923 Glass—Tintad, Com 923 Glass—Tintad, Com 923 Glass—Tintad, Com 923 Glass—Tintad, Com 923 Glass—Tintad, Com 923 Class, Power Door 2	s. rans.  Disc (S.W.)  dow plete r Window 2-dr./4-dr.	Wgf. 230 1 1 10 84 47 7 21 4 8 4 6 12 5 1 1 1 3 4	1	\$558 46 46 439 315 176 215 95 104 100 111 130 95 86/120 24/176	NA ES 363 ES EE ES ENA MAS ENA MA	
menual seering, Battery 1985 EXP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Cellf. Emission System 445 5-Spd. Menual Tran- 445 5-Spd. Menual Tran- 572 Air Cond., Manual 582 Radio, AM 210 Roof, Flip-Up/Sun 525 Speed Control 524 Power Steering (1) 552 Brakes, Power Front 520 Steering Wheel, Tilt 548 Luggage Rack, Dix. 184 Console 570 Defroster, Rear Win 173 Wiper, Washer, Ree 962 Locks, Power Door 2 Fed Mustang, Bore & Str	S. (S.W.)  dow plote r Window -dr./4-dr. Tempe, LTD, Tobb 3.78*3.12	Wgf. 2300 1 10 84 47, 7 21 4 8 4 6 12 5 1 13 13 14 hunderbird (4	4 Cyl. 140 ( 22.87; P.)	\$558 46 76 439 315 176 215 95 104 100 111 130 95 16/120 24/176 E. 140 E. 140	NA ES 363 ES EE ES ENA MAS ENA MA	
menual steering, Battery 1985 EXP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Callf. Emission System 445 5-Spd. Menual Tran- 445 5-Spd. Menual Tran- 527 Air Cond., Manual 21C Roof, Filp-Up/Sun 525 Speed Control 524 Rugage Rack, Dix. 184 Console 570 Defroster, Reer Win 923 Glass—Tinted, Com 173 Wiper, Washer. Reer 962 Locks, Power Door 2 Ford Mustang, Bore & Str Mustang LX Models—406 4-Ps. 2-dr. Sedan 668 (6	a.  Disc  (S.W.)  dow plete -dr./4-dr.  Tempe, LTD, T obs 3.78**13.12  1918) P26/60	Wgf. 230 1 10 84 47 7 21 4 8 4 6 12 5 1 1 1 3 4 hunderbird (4 "; Tax. H.P. E Eng. (99A):	1 Cyl. 140 22,87; P.I 1-bbl. Cart	\$558 46 76 439 643 39 176 215 176 215 100 111 130 95 16/120 24/176 CID-2.3 L. 1 D. 140 cs. 1	NA E S 363 E S E E E E NA NA NA NA NA NA NA NA NA NA NA NA NA	E E E E E E E E E E E E E E E E E E E
menual seering, Battery 1985 EXP & Escort Opti Engines: 99H 4-Cyl. 2.0 L. Diesel Calif. Emission System 445 5-Spd. Menual Tran- 445 5-Spd. Menual Tran- 572 Air Cond., Manual 21C Roof, Flip-Up/Sun 528 Speed Control 524 Power Steering (1) 552 Brakes, Power Front 520 Steering Wheel, Tilt 554 Luggage Rack, Dix. 184 Console 570 Defroster, Rear Win 173 Wiper, Washer, Rea 962 Locks, Power Door 2 Fed Mustang, Bore & Str	s. rans.  Disc (S.W.)  dow plete -dr./4-dr.  Tempe, LTD, T obs 3.78**13.12  00.5** w.b.—Qa 3YB) P26/60;	Wgf. 230 1 10 84 47 7 21 4 8 4 6 12 5 11 13 4 hunderbird (4 "; Text. H.P. E.Eg. (99A). 2 179.3"	1 Cyt. 140 ( 22.87; P.1 1-bbl. Card 2.572 2,613	\$558 46 76 439 315 176 215 95 104 130 110 130 111 130 6/120 24/176 CID-2.3 L. 1 D. 140 cs. 1	NA E S 363 E E E E NA NA S E NA NA NA NA NA NA NA NA NA NA NA NA NA	

**— 28 —** 

FORD Motor Co., The	Americ	an Road		Search on this	48121	
Type of Body		O'r-all	Ship.	Cu. Ft.	Factory	Factory
Pass. Cap.	Model	Longth	Wt.	Yol.	List Pr.	Del'd Pr
1985 <sub>.</sub>						
ompo i. Model—99.9" w.b	-Gas Eng.	(99X) EFI 2	300 High	Swirl Combe	eties (HSC)	
9-1%, 2-01, Sedan 660	P18	176.2"	2,264	367.0	\$7,450.00	\$7,450.0
5-Ps. 4-dr. Seden 54D	P21	176.2"	2,321	367.0	7,450.00	7,450.0
ompo GL Model—99.9" w.b	.—Gas Eng	L (99X)				
5-Ps. 2-dr. Sedan 66D	P19	176.2"	2,289	367.0	\$7,558.00	\$7,558.0
-Ps. 4-dr. Sedan 54D	P22	176.2"	2,348	367.0	7,558.00	7,558.0
empo GLX Model —99.9" w.		g. (99X)	0 200	207.0	*****	** ** *
-Ps. 2-dr. Sedan 660 -Ps. 4-d <u>r. S</u> edan 54D	P20 P23	176.2" 176.2"	2,320 2,377	367.0 367.0	\$8,651.00 8,700.00	\$8,651.0 8,700.0
lodel (TD Sedano) (05.6" v				367.0	8,700.00	6,700.0
-ra. 4-ar. 300an 1040	(P35)	196.5	2.801	434.4	\$9,300.00	\$9,300.0
rs. 4-er. Brougnem		1 )				
Seden 54D	P39/60H	196.5"	2,815	434.4	9,688.00	9,688.0
hunderbird Turbo Coupe10	40" Hb	197.6"	99W) EFI '	lighe		
-Ps. 2-dr. Coupe 63D	P46/934	197.67	2,950	432.5	\$13,797.00	\$13,797.0
Engine (99A, T.W.X.): 4 ion (HSC), Comp. ratio 9.5	1-cyl. 140	No. 20 at	4200	. COMP., INI	ine, nigh Sw is 102 ft/li	In Compu
pm., single exhaust, menue	al 4-and. 1	tens. to Au	tomatic 3	and, trans	Fuel tank	to 16 gal
985 Optional Equip,: Musta:	ng, rempe,	Shia. Faci				
ngines;		<u>Wgt.</u> Lis	t Must	ang Temp	• LTD	Thunderbl
93(V6-232-3.8 L. EFI w/Auto	o Tr.	28 543 39 11	9 E	NA	\$418	S
9M V8-302-5.0 LLX Conv.		39 18			S	398
V8-302-5.0 L.—LX 5dns	i	176 100	00 5	NA.	S	NA
45 5-Spd. Manual O.D. 40 SelectShift Automatic		23 12 70 43		S 363	MA	S 215
4T Automatic Overdrive GT		NA 67		. 363 NA	\$ \$	315 2 <b>3</b> 7
4T Automatic Overdrive LX			51 1	E NA	NĂ	Š
5A Traction-Lok Axle		<u> </u>	5 E	Pke	. Е	Ě
2H Power Steering		ID .22		223	S	\$
72 Air Cond., Man./Auto. 84 Console		49 /43/			Ē	743/905
7Q Defroster, Rear Wind.		8 19 2 14			. NA E	NA E
63 Power Lock Group-LX/G	T	NÃ 210)				NĀ
63 Power Lock Group—LX/G Power Lock Group—2-dr.,	/4-dr, 1	/2 N/			54 /254	213
OG/ KROIOAM/FM W/Stareo		5 14	8 8	109	109	E
86 Radio, AM/FM Stereo, El	ect.	11 30			409	E
20 Tilt Steering Wheel		6 17			E	E
86 Radio, AM/FM Storeo, El 25 Speed Control 2G Tilt Steering Wheel 22 Cellf. Emissions System		,	9 8		Ē	Ē
4R Windows, Power Side		16 27				198
Engine (Dissel 99H): 4	-cvl. 121 c					, Com
milio 22.7 to 1, net bhp. 5;	2 at 4000	rpm., net to	rque 82 fl	./lbs. at 24	100 rpm., sin	gio exhaus
manual 5-and. Trans					-	
For 1985 Tempo Models	, to replac	e Gas Eng.	(99X) with	Diesel Eng	. (99H), add	97 lbs. a
479.00 to figures shown.						
Ford Ltd., Mur	stang & Th	underbird ()	6-232 CID	-3.8 L. EFI	10/4/84	
Ford Ltd., Mu Bore & Streke 3	3.8"x3.4";	Tex. H.P. 3	1.66: P.D.	232 cu. in.	, 3.8 Litery	
.TD Station Wagen—105.6" i-Ps. 4-dr. Sta. Wagon 74D	W.b.—Rea	' Wheel Driv	(KWD)			** ***
		196.5"	2,965	439.2	\$9,810.00	\$9,810.
	J UU.57	W.B.				
flustang LX Model Convertible					*** *** **	\$12,359.
Hustang LX Model Convertible I-Ps. 2-dr. Convertible		179.3"	2.867	3/3.5	317 359 INI	
Mustang LX Model Convertible I-Ps. 2-dr. Convertible 66B (B2L)	P27/602	179.3"	2,862 FEI Carb	373.5	\$12,359.00	¥12,303.
flustang 1X Model Cenvertible I-Ps. 2-dr. Convertible 66B (B2L) Thunderbird (RWD)—104.0*	P27/602	Eng. (993)	EFI Carb.			
Hustang LX Model Convertible 1-Ps. 2-dr. Convertible 668 (B2L) [hunderbird (RWD)—104.0" 1-Ps. 2-dr. Thunderbird 63D	P27/602 vs.b.—Gas			432.5	\$10,681.00	\$10,681.
flustang LX Model Convertible  -Ps. 2-dr. Convertible  668 (B2L)  Thunderbird (RWD)—104.0°  -Ps. 2-dr. Thunderbird 63D  Clan Model—104.0° w.b.	P27/602 W.b.—Cos P46	Eng. (993) 197.6"	EFI Carb. 2,937	432.5	\$10,681.00	\$10,681.
Austang LX Model Convertible 1-Ps. 2-dr. Convertible 1668 (B2L) 1-Ps. 2-dr. Thunderbird (RWD)—104.07 1-Ps. 2-dr. Thunderbird 63D 11an Model—104.07 w.b. 1-Ps. 2-dr. Slan 63D	P27/602 vs.b.—Gas	Eng. (993)	EFI Carb.			\$10,681.
flusteng LX Model Convertible 1-Ps. 2-dr. Convertible 668 (B2L) [hunderbird (RWD)—104.0" 1-Ps. 2-dr. Thunderbird 63D	P27/602 W.b.—Cos P46	Eng. (993) 197.6" 197.6"	EFI Carb. 2,937	432.5	\$10,681.00	1

Fila Model—104.0" w.b.
5-Ps. 2-dr. Fila 630

P46/606

197.6"

2,937

432.5

\$15,406.00

\$15,406.00

Engine (993) Gas. V6-232 cu. in., 3.8 Liter, 2-bbl. carb., comp. ratio 8.7 to 1, net bhp.

120 at 5600 rpm., net borque 205 ft./lbs. at 1600 rpm., single exhaust, Select Shift 3-Spd.

Auto. Trans. Fuel tanks: Mustang 15.4 gals.; Ltd. 16 gals.; Thunderbird 20.6 gals. Tires: Mustang P195/78714 BSW Steel Belted Radial, 35 lbs. pressure; Ltd. same size, pressure 28 lbs. front,

35 lbs. reer; Thunderbird P205/70R14, Steel Belted Radial, 30 lbs. pressure.

1965 Ford LTD Sta. Wag., Mustang	LX Model	Convertible,			
Engineer	178	Fact. List	LTD S.W.	Mustang LX (Com.)	Thunder- bird
99F-V8-302-5.0 L. 99M-V8-302-5.0 L. HO	176	\$396	NA	NA	E
440 3-Spd. Auto, Trans.	139	152 315	ŊA	E	N <u>A</u>
44T 4-Spd. Auto. O.D. Trans.	2	237	2	676	Ę
45A Traction-Lok Axia	Ř	237	ş	6/6	Ę
	· -	29 —	•	•	•

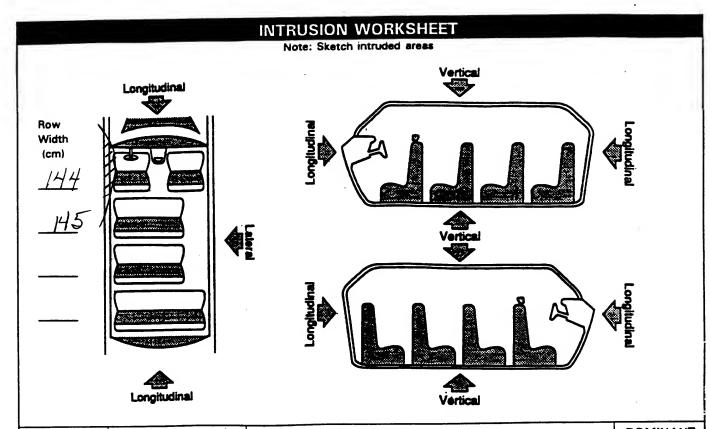
			CDC	WORKSHE	ET			
		С	ODES FOR	OBJECT CO	NTACTED			
(01-30)	– Vehicle Nu	ımber			7) Fence 8) Wall			
Noncoll	lision			(5	9) Building	)		
		ollover (excludes	end-over-er		0) Ditch o			
	Rollover-end				<ol> <li>Ground</li> </ol>			
	Fire or explos	ion			<ol><li>Fire hyd</li></ol>	irant		
	Jackknife				3) Curb			
(35)	Other intraun	it damage (specif	y):		4) Bridge 8) Other fi	xed object (	enecify):	
(36)	Noncollision i	njury		(0	o, Other i	ABU ODJECE (	specity).	
		ision (specify):		(6	9) Unknov	vn fixed obje	ct	
(39)	Noncollision -	- details unknow	'n			onfixed Obje		
				(7		ger car, light		or other
	n_With Fixed C					not in-transp		
		m in diameter)				/heavy truci	c or bus not	in-transport
	Tree (> 10 c				2) Pedestr			
	Shrubbery or	bush			3) Cyclist			
(44)	Embankment			(./-	4) Other n	onmotorist o	r-conveyan	ce ·
(45)	Breakaway po	ole or post (any d	iameter)		5) Vehicle	occupant		
					6) Animal			
	akaway Pole o				7) Train			
		≤ 10 cm in diam				disconnecte		
(51)		> 10 cm but ≤	30 cm in			fell from veh		
(52)	diameter)	> 30 cm in diam	ater)	(8)	B) Othern	onfixed obje	ca (specify):	
		diameter unknow		(8	9) Unknov	vn nonfixed	object	
	Concrete traff			(9:	8) Other e	vent (specify	<i>י</i> ):	:
	Impact attenu	ator parrier (includes g	werdreil\	10	Q) Hakaay	vn event or c	higgs	
(30)	(specify):			(3	onknov	vii event or c	Dject	
		DEFORMAT	ION CLASS	IFICATION E	Y FVFNT N	UMBER	<del></del>	
					(4)	(5)	÷	
Accident		(1) (2)	1	(0)	Specific	Specific	_ (6)	4-1
Sequence	Object	of Force	Incremental Value of	(3) Deformation	Longitudinal	Vertical or	Type of	(7)
Number	Contacted	(degrees)	Shift	Location	or Lateral Location	Lateral Location	Damage Distribution	Deformation Extent
					. /			
0_	01	<u> </u>		<u>_</u>	<del></del>	E	$\overline{\mathbb{M}}$	03
					—			
		<del></del>			—			
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Nasona Aos		COLLISION	DEFORMA	TION CLAS	SIFICATIO	N	
HIGHEST I	DELTA "V"						
Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
	5. <u></u>		7. <u> </u>	8	9. <u>E</u>	10. <u>W</u>	11. <u>0</u> <u>5</u>
12			15	16	17	18	19
		CRUS	H PROFILE	IN CENTIM	ETERS		
	in the appr	file for the dar opriate space	nage described below. (ALL N	in the CDC(s)	above should S ARE IN CEN	be documente NTIMETERS.)	ed
HIGHEST	DELTA "V"						
20. L	21. <u>C,</u>				C <sub>5</sub>	C <sub>e</sub>	22. 
252	000	010	035	036 C	19 0	000	006
Second Hi	ghest Delta "V	, <b></b>					
23. 	24. 				C <sub>5</sub>	C <sub>6</sub>	25. 
							+ 
(Coded impact (250) (998)	ormed End Widt d when highest is an end pland Code to the no 250 centimete No highest sey Unknown	severity e impact.) earest centimet ers or more		(650) (999) ——		ers or more X 2.54 =	268
(For hi	Damage Width ghest severity in Code to the new 250 centimeter Unknown	mpact) sarest centimet	<u>215</u>	(185)	al Average Trai Code to the n centimter 185 centimet Unknown inches	earest	centimeters

		FUEL SYSTEM
30. Are CDCs Documented but Not Coded on The Automated File? (0) No (1) Yes  31. Researcher's Assessment of Vehicle Disposition (0) Not towed due to vehicle damage (1) Towed due to vehicle damage (9) Unknown  32. Is This A Multi-Stage Manufactured Vehicle And/Or A Certified Altered Vehicle? (0) No post manufacturer modifications (1) Yes - post manufacturer modifications (specify):  (Include photograph of CERTIFICATION PLACARD in case report) (9) Unknown if yehicle is modified	0 - 0	35. Location of Fuel Tank-1 Filler Cap  36. Location of Fuel Tank-2 Filler Cap  (O) No fuel tank (1) On back plane (2) Aft of center of the rear wheels (rear axle) on left side plane (3) Aft of center of the rear wheels (rear axle) on right side plane (4) Forward of center of the rear wheels (rear axle) on left side plane (5) Forward of center of the rear wheels (rear axle) on right side plane (6) Over the center of the rear wheels (rear axle) on left side plane (7) Over the center of the rear wheels (rear axle) on right side plane (8) Other (specify): (9) Unknown  37. Type of Fuel Tank-1  38. Type of Fuel Tank-2  TO) No fuel tank (electrical vehicle) (1) Metallic (2) Non-metallic
(5) STATISTIC IS TISSUES		(9) Unknown
FIRE OCCURRENCE  33. Fire Occurrence (0) No fire  Yes, fire occurred (1) Minor (2) Major (9) Unknown  34. Origin of Fire (0) No fire (1) Vehicle exterior (front, side, back, top) (2) Exhaust system (3) Fuel tank (and other fuel retention system parts) (4) Engine compartment (5) Cargo/trunk compartment (6) Instrument panel (7) Passenger compartment area (8) Other location (specify):  (9) Unknown	0	39. Location of Fuel Tank-1  40. Location of Fuel Tank-2  (0) No fuel tank  (1) Aft of center of the rear wheels (rear axle) centered  (2) Aft of center of the rear wheels (rear axle) left side  (3) Aft of center of the rear wheels (rear axle) right side  (4) Forward of center of the rear wheels (rear axle) centered  (5) Forward of center of the rear wheels (rear axle) left side  (6) Forward of center of the rear wheels (rear axle) right side  (7) Over center of the rear wheels (rear axle) right side  (7) Over center of the rear wheels (rear axle)  (8) Other (specify):  (9) Unknown  41. Damage to Fuel Tank-1  42. Damage to Fuel Tank-2  (0) No fuel tank  (1) No damage to fuel tank  (2) Deformed, no seam failure  (3) Deformed, with a seam failure  (4) Punctured  (5) Lacerated (ripped)  (6) Abraded (scraped)  (7) Filler neck separation from the fuel tank  (8) Other damage (specify):  (9) Unknown

43.	Leakage Location of Fuel System-1	47. Is This Vehicle Equipped With More Than Two Fuel Tanks?
44.	Leakage Location of Fuel System-2	(0) No (one or two tanks only)
	(O) No fuel tank	A The Tanks
	(1) No fuel leakage	Yes - More Than Two Tanks (1) Yes no damage to any tank or filler
	Primary Area Of Leakage	cap and no fuel system leakage
		(2) Yes - no damage to any tank or filler
	(2) Tank	cap but there is fuel system leakage
	(3) Filler neck	
	(4) Cap	(specify leakage location):
	(5) Lines/pump/filter	
	(6) Vent/emission recovery	(3) Yes - damage to an additional tank or
	(8) Other (specify):	filler cap and there is fuel system leakage
		(specify the following):
	(9) Unknown	Type of tank
	$\sim 1$	
45.	Fuel Type-1	Filler cap location
	^ ^	Tank damage
46	Fuel Type-2	Location of leakage
70.	, , , , , ,	Type of fuel
	Single Fuel Type	Type of fuel(9) Unknown if more than two tanks
		,=, =
	(00) No fuel tank	·
	(01) Gasoline	
	(O2) Diesel	001115150
	(03) CNG (Compressed Natural Gas)	COMMENTS
	(04) LPG (Liquid Petroleum Gas) also	
	known as Propane	
	(05) LNG (Liquid Natural Gas)	
	(06) Methanol (M100 or M85)	
	(07) Ethanol (E100 or E85)	
	(OB) Other (Hydrogen or others) (specify):	
	Electric Powered or Electric/Solar	
	Powered Vehicles	
	(10) Lead Acid Battery	
	* · · · · · · · · · · · · · · · · · · ·	
	(11) Nickel-Iron Battery	
	(12) Nickel-Cadmium Battery	
	(13) Sodium Metal Chloride Battery	
	(14) Sodium Sulfur Battery	
	(18) Other (Specify):	
	(98) Other Hybrid (specify):	
	(99) Unknown fuel type	
i		
l		
<u> </u>		
	*** STOP: IF THE CDS APPLICAB	LE VEHICLE WAS NOT TOWED ***
	(GV <sup>*</sup>	10=0)
İ	·	
	DO NOT COMPLETE THE	INTERIOR VEHICLE FORM.

National Highway Traffic Safety Administration	INTERIOR VE	HICLE FORM	NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM
	10		GLAZING
Primary Sampling Unit Number	a - <del>' 0</del> [	Type of Window/Wi	indshield Glazing
2. Case Number - Stratum	7517	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2-17. RF 2 18. LR 2 19. RR 2
3. Vehicle Number	02	20. BL 7 21. Roof	_
INTEGRITY		(0) No glazing	_
Passenger Compartment Integrity     (00) No integrity loss	06	(1) AS-1 — Lamina (2) AS-2 — Temper (3) AS-3 — Temper (4) AS-2 — Temper	red red-tinted (original) red-with after market tint
Yes, Integrity Was Lost Through (01) Windshield (02) Door (side)		(6) AS-14 — Glass (7) Glazing removed	d prior to eccident
(03) Door/hatch (back door) (04) Roof		(8) Other (specify):	
(05) Roof glass (06) Side window		Window Precrash G	laning Status
(07) Rear window (backlight) (08) Roof and roof glass			
(09) Windshield and door (side) (10) Windshield and roof		23. WS / 24. LF 28. BL / 29. Roof	$\frac{3}{2}$ 25. RF $\frac{2}{2}$ 26. LR $\frac{2}{2}$ 27. RR $\frac{2}{3}$
(11) Side and raar window (side window a (12) Windshield and side window	and backlight)	28. BL / 29. ROOT	<u>0</u> 30. Other
(13) Door and side window		(0) No glazing (1) Fixed	
(98) Other combination of above (specify)	): 	(2) Closed (3) Partially opened	
(99) Unknown		(4) Fully opened (7) Glazing remove (9) Unknown	
Door, Tailgate or Hatch Opening		Glazing Damage fro	m Impact Forces
5. I.F <u>.3</u> 6. RF <u>/</u> 7. LR <u>3</u> 8. RR_	<u> </u>	•	2 33. RF 1 34. LR 1 35. RR 1
(0) No door/gate/hatch (1) Door/gate/hatch remained closed and	operational	36. BL <u>l</u> 37. Roof	<u>O</u> 38. Other
(2) Door/gate/hatch came open during co	llision	(0) No glazing	from impost forces
(3) Door/gate/hatch jammed shut (8) Other (specify):		(2) Glazing in place	age from impact forces and cracked from impact forces
(9) Unknown		(4) Glazing out-of-	and holed from impact forces place (cracked or not) and not holed from
		impact forces (5) Glazing out-of-p	place and holed from impact forces
Damaga /Failura Associated with Door	Tailagta or Hatab	(6) Glazing disinteg (7) Glazing remove	grated from impact forces of prior to accident
Damage/Failure Associated with Door, Opening in Collision. If IV05-IV09 ≠		(9) Unknown if dar	•
10. LF <u>Ø</u> 11. RF <u>Ø</u> 12. LR <u>Ø</u> 13. RI	R <u>Ø</u> 14. TG/H <u>Ø</u>	•	m Occupant Contact
(0) No door/gate/hatch or door not opens	ed .		1 41. RF 42. LR 43. RR
Door, Tailgate or Hatch Came Open Durin (1) Door operational (no damage)	g Collision	44. BL 45. Roof	<u>O</u> 46. Other <u>I</u>
(2) Latch/striker failure due to damage		(0) No glazing (1) No occupant co	ontact to glazing
(3) Hinge failure due to damage			ted by occupent but no glazing demage
(4) Door structure failure due to damage (5) Door support (i.e., pillar, sill, roof side			and cracked by occupant contact
etc.) failure due to demege	> 1 GH,		e and holed by occupant contact
(6) Latch/striker and hinge failure due to	demege	1	place (cracked or not) by occupant of holed by occupent contact
(8) Other failure (specify):			-place by occupant contect end holed by
(9) Unknown		(7) Glazing remove	
			ntacted by occupant

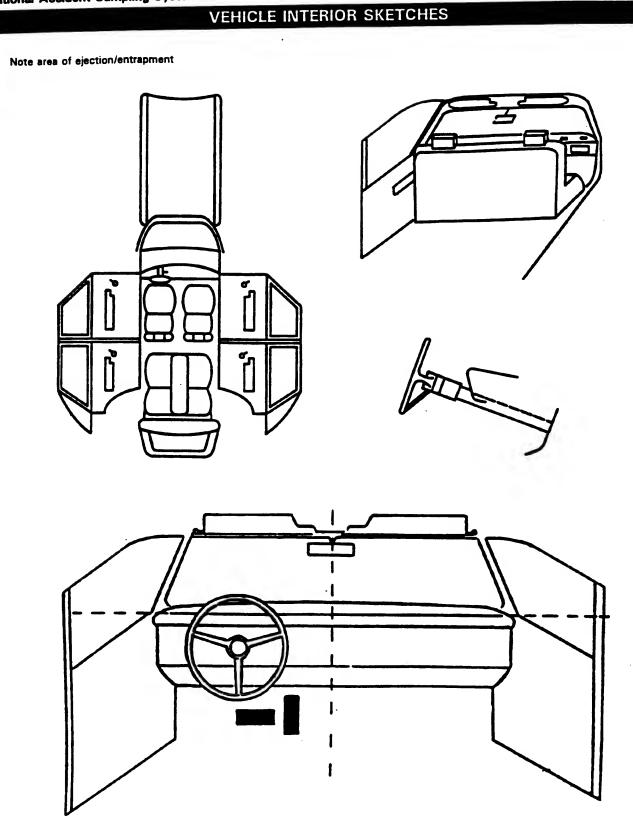


LOCATION OF INTRUSION	INTRUDED COMPONENT	COMPARISON VALUE	Measu	rements Are in Cen INTRUDED VALUE	ntimeters) =	INTRUSION	DOMINANT CRUSH DIRECTION
11	DOOR	131	_	101	=	30	LAT
11	B-PILLAR	128	_	106	=	22	LAT
2\	DOOR	145	-	140	=	5	LAT
11	Kick? Mne!	54	_	26	=	28	LAT
11	Seat Back	0	. –	0	=	0	LAT
11	seat cush	49.5	_	41	=	7.5	LAT
	0		_		**		
			_		=		
			_		=		
			_		=		
			_		=		
			_		#		
			_		=		
			_		=		
			_		_=		

		OCCU	PANT AR	EA INTRUSION
Note	: If no intrusion	s, leave variables IV47-IV	/86 blank.	INTRUDING COMPONENT
		Intruding Magnitude Component of Intrusion	Dominant Crush Direction	Interior Components (01) Steering assembly (02) Instrument panel left (03) Instrument panel center
1st	47	48. 1 1 49. 4	50. <u>3</u>	(O4) Instrument panel right (O5) Toe pan (O6) A (A1/A2)-pillar (O7) B-pillar
2nd	51. <u> </u>	52. <u>1</u> 0 53. <u>3</u>	54. <u>3</u>	(08) C-pillar (09) D-pillar (10) Side panel - forward of the A1/A2-pillar (11) Door panel (side)
3rd	55.	56. <u>07</u> 57. <u>3</u>	58. <u>3</u>	(12) Side panel - rear of the B-pillar (13) Roof (or convertible top) (14) Roof side rail (15) Windshield
4th	59	60. <u>2</u> <u>5</u> 61. <u>1</u>	62. <u>3</u>	(16) Windshield header (17) Window frame (18) Floor pan (includes sill) (19) Backlight header
5th	63. <u>2</u> <u>/</u>	64. / / 65. /	66. <u>3</u>	(20) Front seat back (21) Second seat back (22) Third seat back (23) Fourth seat back
6th	67	68 69	70	(24) Fifth seat back (25) Seat cushion (26) Back door/panel (e.g., tailgate) (27) Other interior component (specify):
7th	71	72 73	74	
8th	75	76 77	78	Exterior Components (30) Hood (31) Outside surface of this vehicle (specify):  (32) Other exterior object in the environment
9th	79	80 81	82	(specify): (33) Unknown exterior object (97) Catastrophic (98) Intrusion of unlisted component(s)
10th	83	84 85	86	(specify): (99) Unknown
LOCA	TION OF INTE	USION		MAGNITUDE OF INTRUSION
Se	ont Seat (11) Left (12) Middle (13) Right econd Seat (21) Left (22) Middle	Fourth Seat (41) Left (42) Middle (43) Right (97) Catastrop (98) Other enc	losed	<ul> <li>(1) ≥ 3 centimeters but &lt; 8 centimeters</li> <li>(2) ≥ 8 centimeters but &lt; 15 centimeters</li> <li>(3) ≥ 15 centimeters but &lt; 30 centimeters</li> <li>(4) ≥ 30 centimeters but &lt; 46 centimeters</li> <li>(5) ≥ 46 centimeters but &lt; 61 centimeters</li> <li>(6) ≥ 61 centimeters</li> <li>(7) Catastrophic</li> <li>(9) Unknown</li> </ul>
Th	(23) Right nird Seat (31) Left (32) Middle (33) Right	(99) Unknown	-	DOMINANT CRUSH DIRECTION (1) Vertical (2) Longitudinal (3) Lateral (7) Catastrophic (9) Unknown

	(All Messur	rements Are in Centimet	ers)		
COMPARISON VALUE - DAMAGE VALUE = DEFORMATION					
	_		=		
	_		=		
	-No	DEFO	R MA	TION	
	_		=		

STEERING COLUMN	INSTRUMENT PANEL
37. Steering Column Type  (1) Fixed column (2) Tilt column (3) Telescoping column (4) Tilt and telescoping column (8) Other column type (specify):  (9) Unknown	92. Odometer Reading  Unknown if odometer  kilometers has rolled over!  Code to the nearest 1,000 kilometers  (000) No odometer  (001) Less than 1,500 kilometers  (500) 499,500 kilometers or more  (999) Unknown  miles x 1.6093 = 52943 kilometers
88. Tilt Steering Column Adjustment (0) No tilt steering column (1) Full up (2) Between full up and center (3) Center (4) Between center and full down (5) Full down (9) Unknown	93. Instrument Panel Damage from Occupant Contact? (0) No (1) Yes (9) Unknown  94. Type of Knee Bolster Covering (0) No knee bolster
89. Telescoping Steering Column Adjustment (0) No telescoping steering column (1) Full back (2) Between full back and midpoint (3) Midpoint (4) Between midpoint and full forward (5) Full forward (9) Unknown	(1) Padded (2) Rigid plastic (8) Other (specify): (9) Unknown  95. Knee Bolsters Deformed from Occupant Contact? (0) No knee bolster (1) No deformation (2) Yes - deformation (9) Unknown
90. Steering Rim/Spoke Deformation  Code actual measured  deformation to the nearest centimeter (00) No steering rim deformation (01-14) Actual measured value in centimeters (15) 15 centimeters or more (98) Observed deformation cannot be measured (99) Unknown	96. Did Glove Compartment Door Open During Collision(s)? (0) No glove compartment door (1) No - door did not open (2) Yes - door opened (9) Unknown  97. Adaptive (Assistive) Driving Equipment
91. Location of Steering Rim/Spoke Deformation (00) No steering rim deformation  Quarter Sections (01) Section A (02) Section B (03) Section C (04) Section D  Half Sections (05) Upper half of rim/spoke (06) Lower half of rim/spoke (07) Left half of rim/spoke (08) Right half of rim/spoke (09) Complete steering wheel collapse (10) Undetermined location (99) Unknown	(0) No adaptive driving equipment (1) Adaptive driving equipment installed (Check all that apply.) [] Hand controls for braking/acceleration [] Steering control devices (attached to OEM steering wheel [] Steering knob attached to steering wheel [] Low effort power steering (unit or device) [] Replacement steering wheel (i.e., reduced diameter) [] Joy-stick steering controls [] Wheelchair tie-downs [] Modification to seat belts (specify): [] Additional or relocated switches (specify): [] Raised roof [] Wall-mounted head rest (used behind wheelchair) [] Other adaptive device (specify):  (9) Unknown



Sketch windshield contact(s) and the dameged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure.

Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.

Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

	POI	INTS OF OCC	UPANT CONTACT		
Interio Compor Contact Contact	nent No. If	Body Region If Known	Supporting Physical E	Evidence	Confidence Level of Contact Point
Α					
В					
С					
D					
E					
F					
G					
Н					
1					
<del>-                                    </del>					
K					
L					
M N					
FRONT (001) Windshield (002) Mirror (003) Sunvisor (004) Steering wheel rim (005) Steering wheel hub/sp (006) Steering wheel (combined of codes 004 and 005 (007) Steering column, transmission selector lever, other attachment (008) Cellular telephone or (radio (009) Add on equipment(a.g. deck, air conditioner) (010) Left instrument panel below (011) Center instrument panel below (012) Right instrument panel below (013) Glove compartment d (014) Knee bolster (015) Windshield including (more of the following header, A (A1/A2)-pil instrument panel, mirr steering assembly (dradie only) (016) Windshield including (more of the following header, A (A1/A2)-pil instrument panel, or (passenger side only) (017) Windshield reinforced exterior object, (spec	LEFT SIDE (051) Left exc exc srm nstion (052) Left (053) Left (054) Left (055) Oth  CB (056) Left (057) Left (057) Left (058) Left exc srm (053) Left (058) Left (059) Left and sill, tape (058) Left incl folk sill, or r (101) Rig exc srm exc, or (102) Rig excer srm exc, or (103) Rig excer srm exc, or (104) Rig excer srm exc, or (104) Rig excer srm exc, or (105) Ott lar, nirror (106) Rig (107) Rig by (108) Rig (109) Rig ffy): excify):  t aide intarior surfsce, luding hardware or rests t side hardware or rest t A (A1/A2)-pillar t B-pillar ter left pillar (apacify):  It side window glase t aide window still t side window still t side window glass luding one or more of the owing: frame, window A (A1/A2)-pillar, B-pillar, ler left aide object ecify):  DE ht side intarior surface, cluding hardware or mests htt aide hardware or mest int A (A1/A2)-pillar	AIR BAG (170) Air bag-driver side (175) Air bag compartment cover-driver side (180) Air bag-passenger side (185) Air bag compartment cover-passenger side (190) Other air bag (specify)  (195) Other air bag compartment cover (specify)  ROOF (201) Front header (202) Reer header (203) Roof left side rail (204) Roof right side rsil (205) Roof or convertible top	(301) Backlight (rea (302) Backlight stor door, etc. (303) Other rear object of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of 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control of the control of t	age rack, lect (specify):  IVE) DRIVING Is for eration rol devices DEM ateering In attached to all staering wheel diameter) Is ring controls Is deviced to set balts, relocated lecify):  In the device diameter lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify 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lecify lecify lecify lecify lecify lecify lecify lecify lecify lecify lec	

#### MANUAL RESTRAINTS

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
	Availability	4		4,
F	Evidence of usage	64		04
į p	Used in this crash?	99		00
R S	Proper Use			0
Ť	Failure Modes			0
	Anchorage Adjustment			1
	Availability	3	3	3
S	Evidence of usage	0/	0/	0/
SECOZO	Used in this crash?	00	00	00
Ö	Proper Use	0	0	0
Ň	Failure Modes	0	0	0
U	Anchorage Adjustment	0	0	0
	Availability			
0	Evidence of usage			
Ť	Used in this crash?			
H	Proper Use			
R	Failure Modes			
	Anchorage Adjustment	···		

#### Manual (Active) Belt System Availability

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available type unknown

#### Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify):
- (9) Unknown

#### Manual (Active) Belt System Use

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify):
- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used type unknown
- (08) Other belt used (specify):
- (12) Shoulder belt used with child safety
- seat
  (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with
- child aafety aeat
  (15) Belt used with child aafety seat
- type unknown
  (18) Other belt used with child safety
- seat (specify):\_\_\_\_\_\_\_(99) Unknown if belt used

#### Proper Use of Manual (Active) Belts

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child aafety

#### Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or
- (5) Beit worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child aafety seat (specify):
- (8) Other improper use of manual belt system (specify):
- (9) Unknown

# Manual (Active) Belt Failure Modes During Accident

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage aeparated
- (5) Other anchorage asparated (specify):
- (6) Broken retractor
- (7) Combination of above (specify):
- (8) Other manual belt failure (specify):
- (9) Unknown

#### Shoulder Belt Upper Anchorage Adjustment

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

#### Adjustable shoulder Belt Upper Anchorage

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

ationa	l Accident Sampling System-Cr	ashworthiness Data System: In	terior Vehicle Form	Page
		AUTOMATIC RESTRAIL	NTS	
NOTE	S: Encode the data for each apple below. Restraint systems shapes assessment Form.	plicable front seat position. The		be found the Occupan
		Left Front	Right Front	Other
F	Availability/Function	0	0	
l R	Deployment	0	0	
S	Failure		0	
(0) (1) Non (2) (3) (9) Are Th System (0) (1) (2)	System Availability/Function Not equipped/not evailable Air beg  -functional Air bag disconnected (specify):  Air bag not reinstelled Unknown  ere Indications of Air Bag in Failure? (This Occupant Position) Not equipped/not available No Yes (specify): Unknown	Frontal Air Bag System Deployment (This Occupant Position) (0) Not equipped/not evailable (1) Deployed during accident (as a of impact) (2) Deployed inadvertently just pri accident (3) Deployed, accident sequence undetermined (4) Deployed as a result of a noncevent during accident sequence (e.g., fire, explosion, electrical (5) Unknown if deployed (7) Nondeployed (9) Unknown	of impact)  or to (2) Deployed inadvertent to eccident (3) Deployed, details unk (4) Deployed a result of noncollision event du sequence (e.g., fire, e electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown	Position) "other" air bag ient (as a result y just prior nown of a ring accident
		AUTOMATIC BELTS		<u> </u>
		Left	Right	
_	Availability/Function	0		· · · · · · · · · · · · · · · · · · ·
F	Use	0	0	
R	Туре	0 0		
Ť	Proper Use	0	0	
	Failure Modes	0	0	
(0) (1) (2) (3) <i>Nor</i> (4)	hatic (Passive) Belt System bility/Function Not equipped/not evailable 2 point eutometic belts 3 point autometic belts Automatic belts - type unknown  -functional Automatic belts destroyed or rendered inoperetive Unknown	Proper Use of Automatic (Passive) Boundary System  (0) Not equipped/not eveileble/not (1) Automatic belt used properly (2) Automatic belt used properly child safety seet  Automatic Belt Used Improperly (3) Automatic shoulder belt worm arm  (4) Automatic shoulder belt worm back	During Accident  (0) Not equipped/not evi (1) No automatic belt fai with (2) Torn webbing (stretc included) (3) Broken buckle or late (4) Upper anchorage sep under (5) Other anchorage sep	illable/not in use lure(s) hed webbing no hplate arated arated (specify)
(0) (1) (2) (3) (9) Auton (0) (1) (2)	Not equipped/not aveilable/destroyed or rendered inoperative Automatic belt in use Automatic belt in use (manually disconnected, motorized treck inoperative) Automatic belt use unknown Unknown  Natic (Passive) Belt System Type Not equipped/not evailable Non-motorized system Motorized system Unknown	(5) Automatic belt worn around r then one person (6) Lap portion of automatic belt on abdomen (7) Automatic lap end shoulder b automatic shoulder belt used improperly with child safety seat (specify (8) Other improper use of automatic system (specify): (9) Unknown	worn (9) Unknown elt or	failure (specify

## FIRST SEAT FRONTAL AIR BAGS

NOTES: Encode the applicable data for the driver and first seat passenger in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

	Driver	Passenger
Type of air bag?	5	.0
Flaps open at tear points?	0	0
Flaps damaged?	0	0
Air bag damaged?	00	00
Source of air bag damage	00	<u> </u>
Air bag tethered?		<u> </u>
Air bag have vent ports?	<u> </u>	-
Other occupant contact air bag?	<u>O</u>	<u> </u>
Occupant wearing eyewear?		

#### Type of Air Beg

- (0) Not equipped/not available
- (1) Original manufacturer installed system
- (2) Retrofitted air bag
- (3) Replacement air bag
- (8) Unknown type of air bag
- (9) Unknown

# Did Air Bag Module Cover Flap(a) Open At Designated Tear Points?

- (O) Not equipped/not available
- (1) No
- (2) Yes
- (3) Deployed, unknown if flap(s) opened at designated tear points
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

# Were Air Bag. Module Cover Flap(a) Damaged?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if air bag module cover flap(s) damaged
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

#### Was There Damage To The Air Bag?

- (00) Not equipped/not available
- (01) Not demaged

Yes - Air Bag Damage

- (02) Ruptured
- (03) Cut
- (04) Torn
- (05) Holed
- (06) Burned (07) Abraded
- (88) Other damage (specify):
- (95) Damaged, details unknown
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

#### Source of Air Bag Damage

- (00) Not equipped/not available
- (01) Not damaged
- (02) Object worn by occupant, (apacify):
- (03) Object carried by occupant, (specify):
- (04) Adaptive/assistive controls, (specify):
- (05) Fire in vehicle
- (06) Thermal burns
- (07) Rescue or emergency efforts
- (88) Other damage source (specify):
- (95) Damaged, unknown source
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

#### Was The Air Bag Tethered?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of tether straps):
- (3) Deployed, unknown if tethered
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

#### Did The Air Bag Have Vent Ports?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of vent ports):
- (3) Deployed, unknown if vent ports
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

# Was the Air Bag in this Occupant's Position Contacted by Another Occupant?

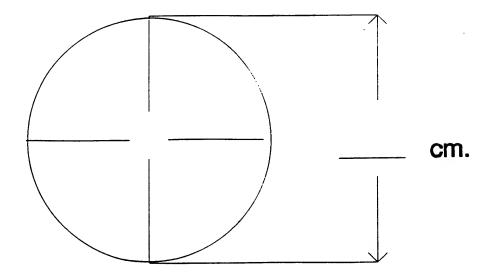
- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if other occupant contact to air bag
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

#### Was This Occupant Wearing Eye-wear?

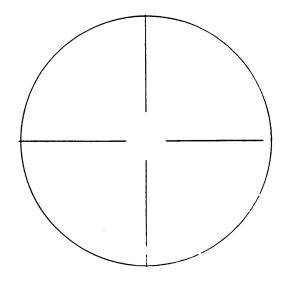
- (0) Not equipped/not available
- (1) No
- (2) Eyegiasses/aungiasses
- (3) Contact lenses
- (4) Deployed, unknown if eyewear worn
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

## DRIVER AIR BAG DAMAGE AND CONTACT SKETCHES

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Front)



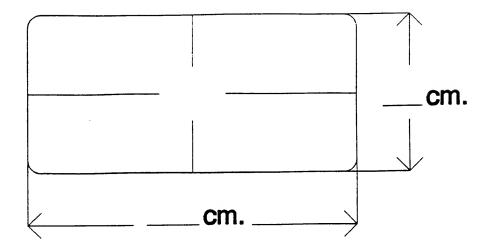
2. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Back)



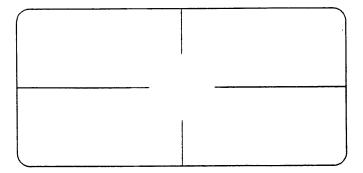
DRIVER AIR BAG S	SKETCHES (Cont'd)
3. DRIVER AIR BAG MODULE COVER FLAP SIZE (DOUBLE) a. Upper Flap  width (W <sub>U</sub> ) width (W <sub>L</sub> ) height (H <sub>U</sub> ) height (H <sub>L</sub> )  H <sub>L</sub> H <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub> W <sub>L</sub>	
4. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE .	5. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS
6. SKETCH LOCATION OF CIRCULAR AIR BAG VENT PORTS  11 12 1 10 2 9 3 8 4 7 6 5	

## PASSENGER AIR BAG DAMAGE AND CONTACT SKETCHES

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON PASSENGER AIR BAG (Front)



2. SKETCH DAMAGE AND CONTACT EVIDENCE ON PASSENGER AIR BAG (Back)



PASSENGER AIR BAG	G SKETCHES (Cont'd)
3. PASSENGER AIR BAG MODULE COVER FLAP SIZE (SINGLE) a. Flap width (W) height (H) H	4. PASSENGER AIR BAG MODULE COVER FLAP SIZE (DOUBLE)  a. Upper Flap  width (Wu)  height (Hu)  Wu  Hu  Hu  Hu  Hu  Hu  Hu  Hu  Hu  Hu
SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE  7. SKETCH LOCATION OF RECTANGULAR AIR BAG VENT PORTS      10 11 12 1 2 9 3 8 7 6 5 4	6. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS

"OTHER" AIR BAG DAMAGE AND CONTACT SKETCHES	l
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1. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Front)	
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2. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Back)	
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. SKETCH AIR BAG MODUI	LE FLAP AND SIZE OR C	PENING FOR AIRBAG	
. UNLIGHT AIR DAG INGDO			
. SKETCH AIR BAG VENT	PORTS		
			•

## **HEAD RESTRAINTS/SEAT EVALUATION**

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
	Head Restraint Type/Damage			3
F	Seat Type	02		02
1	Seat Performance	1		/
R S	Seat Orientation	/		11
T	Seat Track Position	3		3
	Seat Back Incline Pre/Post Impact	23		23
	Head Restraint Type/Damage	0	0	٥
9	Seat Type	03	03	03
S E C	Seat Performance		1	1
0	Seat Orientation	/	/	/
N D	Seat Track Position	1	/	/
	Seat Back Incline Pre/Post Impact	01	01	0/
	Head Restraint Type/Damage			
Т	Seat Type			
H	Seat Performance			
Ŕ	Seat Orientation			
D	Seat Track Position			
	Seat Back Incline Pre/Post Impact			
	Head Restraint Type/Damage			
0	Seat Type			
T H	Seat Performance			
E R	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

## HEAD RESTRAINTS/SEAT EVALUATION

Head Restraint Type/Damage by Occupant at This Occupant Position Position)

- (O) No head restraints
- (1) Integral no damage(2) Integral damaged during accident
- (3) Adjustable no damage(4) Adjustable damaged during accident
- (5) Add-on no damage(6) Add-on damaged during accident
- Other Specify):
- Unknown

Seat Type (this Occupant Position)

- (00) Occupant not seated or no
- (01) **Bucket**
- (02) Bucket with folding back
- (03) Bench
- (04)Bench with separate back cushions
- Bench with folding back(s) (05)
- (06)Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify):
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

Seat Performance (this Occupant

- (0) Occupant not seated or no seat
- No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed (specify):
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify):
- (7) Combination of above (specify):
- (8) Other (specify):
- (9) Unknown

Seat Orientation (this Occupant Position)

- (0) Occupant not seated or no seat
- Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- Side facing seat (outward) (4)
- (8) Other (specify):
- (9) Unknown

Seat Track Adjusted Position Prior To impact

- (0) Occupant not seated or no seat
- (1) Non-adjustable seat track

Adjustable Seat Track

- (2) Seat at forward most track position
- (3) Seat between forward most and middle track positions
- Seat at middle track position
- (5) Seat between middle and rear most track positions
- (6) Seat at rear most track position
- (9) Unknown

Seat Back Incline Prior and Post Impact

(OÒ) Occupant not seated or no seat

(01)Not adjustable

Upright prior to impact

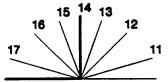
- (11) Moved to completely rearward position
- Moved to rearward midrange position
- (13)Moved to slightly rearward position
- Retained pre-impact position
- (15)Moved to slightly forward position
- Moved to forward midrange (16)position
- Moved to completely forward (17)position

Slightly reclined prior to impact

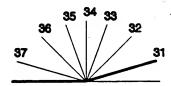
- (21) Moved to completely rearward position
- Moved to rearward midrange (22)position
- Retained pre-impact postion (23)
- (24)Moved to upright position
- (25)Moved to slightly forward
- position (26)Moved to forward midrange
- position Moved to completely forward (27)
- position

Completely reclined prior to impact

- (31) Retained pre-impact position
- (32)Moved to rearward midrange position
- (33)Moved to slightly rearward position
- (34) Moved to upright position
- (35)Moved to slightly forward position
- Moved to forward midrange (36)position
- Moved to completely forward position
- (99) Unknown







Coding diagrams for Seat Back Incline Position Prior and Post Impact

**DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE** (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

EJECTION/ENTRAPMENT DATA  Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.					
EJECTION No [X] Yes [] Describe indications of ejection and body parts involved in partial ejection(s):					
Occupant Number					
Ejection					
(Note on Vehicle Interior Sketch) Ejection Area					
Ejection Medium					
Medium Status					
Ejection (1) Complete ejection (2) Partial ejection (3) Ejection, Unknown degree (9) Unknown  Ejection Area (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear	(7) Roof (8) Other area (e.g., pickup, etc.) (specific points) (9) Unknown  Ejection Medium (1) Door/hatch/tailga (2) Nonfixed roof str (3) Fixed glazing (4) Nonfixed glazing	ecify):  ate ructure	(9) Unknown	dium (specify):  (Immediately Prior	
ENTRAPMENT No J Yes  Describe entrapment mechanism:	s [ ]				
Component(s):					
(Note in vehicle interior diagram)					

	SEAT FIELD ASSESSMENT			
When a child safety seat is present enter the occur the occupant's number using the codes listed be	upant's number in the first row and complete the column below slow. Complete a column for each child safety seat present.			
Occupant Number				
1. Type of Child				
Safety Seat				
2. Child Safety Seat Orientation				
3. Child Safety Seat Harness Usage				
4. Child Safety Seat Shield Usage				
5. Child Safety Seat Tether Usage				
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat			
1. Type of Child Safety Seat	4. Child Safety Seat Shield Usage			
(0) No child safety seat	5. Child Safety Seat Tether Usage			
(1) Infant seat	Note: Options Below Are Used for Variables 3-5			
(2) Toddler seat (3) Convertible seat	(00) No child safety seat			
(4) Booster seat				
(7) Other type child safety seat (specify):	Not Designed with Harness/Shield/Tether (O1) After market harness/shield/tether			
<ul><li>(8) Unknown child safety seat type</li><li>(9) Unknown if child safety seat used</li></ul>	added, not used (O2) After market harness/shield/tether use (O3) Child safety seat used, but no after n			
2. Child Safety Seat Orientation	harness/shield/tether added (09) Unknown if harness/shield/tether			
(00) No child safety seat	added or used			
Designed for Rear Facing for	Designed Mitch Harman /Chield Cathon			
This Age/Weight (01) Rear facing	Designed With Harness/Shield/Tether (11) Harness/shield/tether not used			
(O2) Forward facing	(12) Harness/shield/tether used			
(08) Other orientation (specify):	(19) Unknown if harness/shield/tether used			
(09) Unknown orientation	Unknown If Designed With Harness/Shield/Tetho (21) Harness/shield/tether not used			
Designed for Forward Facing for This	(22) Harness/shield/tether used			
Age/Weight	(29) Unknown if harness/shield/tether used			
(11) Rear facing	(00) 11 have 26 of 11d out on the con-			
(12) Forward facing (18) Other orientation (specify):	(99) Unknown if child safety seat used			
(19) Unknown orientation	<ol><li>Child Safety Seat Make/Model (Specify make/model and occupant number)</li></ol>			
Unknown Design or Orientation For This				
Age/Weight, or Unknown Age/Weight				
(21) Rear facing				
(22) Forward facing				
(28) Other orientation (specify):				
(29) Unknown orientation				
(99) Unknown if child safety seat used 3. Child Safety Seat Harness Usage				

# Appendix F:

NASS CDS INTERVIEW FORM:

CASE VEHICLE DRIVER

U.S. Department of Transportation

National Highway Traffic Safety Administration

## **INTERVIEW FORM (A)**

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number $\frac{1}{9}$	Interviewee(s) Role or Name(s):
3. Vehicle Number	
acquisition of all pertinent data.	uestions prior to conducting interview(s) to ensure the
	as an appointment made for a follow-up interview?
DRIVER'S DESCRI	IPTION OF ACCIDENT EVENTS
I was W/B on	US in inside lane and
Acouple seconds be	fore impact my daughten
saw her come out	and SAID "MOM!" Dulled
out and stopped ,	in front of me WE
hit	·
	•
OCCUPANT'S DESC	CRIPTION OF ACCIDENT EVENTS
20501512 01505	IONS TO ASK INTERVIEWEE
SPECIFIC QUEST	5 V2 preted u.o facus E
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 NZ ended up forcing E 1 In ORI JANT
III MINDIE, + STROPE	
Davider DOR	= 27
Daughter DOB Her DOB	- = = 27 = 46

<b>ACCIDENT</b>	DIAGRAM
-----------------	---------



The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the environment.

**NORTH** 

C	RASH DATA INFORMATION		
IF POSSIBLE OB	TAIN THIS INFORMATION FROM THE DRIVER:		
SOURCE OF INFORMATION:	[ ] Driver [ ] Other occupant [ ] Relative/friend		
In which direction were you traveling?	[ ] North [ ] South [ ] East [ ] West (Or where were they coming from or going to?)		
What lane were you in?	[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] Other  Note: lane 1 is the right curb lane		
What was the condition of the roadway?	Dry [ ] Wet [ ] Snow [ ] Slush [ ] Ice [ ] Sand, dirt, oil [ ] Other (specify)		
What was the weather like? (Check all that apply)	No adverse conditions [ ] Rain [ ] Fog [ ] Sleet [ ] Hail [ ] Snow [ ] Other (specify)		
Was there any type of sign or signal present?  (check all that apply)	Traffic control signal (includes flashing beacons, lane control signals, and green / amber / red signal)  [ ] Stop sign [ ] Yield sign [ ] School zone sign  Other regulatory sign (No "U" turn, left turn only, wrong way, etc.) specify:  Marning sign (Winding road sign, stop ahead, intersection signs, etc.) specify:  [ ] Miscellaneous control (including railroad controls) specify:  [ ] None [ ] Unknown		
If a traffic control device was present, was it functioning properly at the time of the crash?	No traffic control device present   Not functioning properly (includes defaced, badly worn, covered with snow, rotated etc.) specify:   Functioning properly   Unknown		
Can you estimate your travel speed before the crash? (in mph)	[] Stopped [] 11-20 1 31-40 35 [] 51-60 [] 70+ [] 1-10 [] 21-30 [] 41-50 [] 61-70 [] Unknown		
Just before the crash, what were you doing or intending to do? (check all that apply)	Going straight [ ] Stopped [ ] Turning left [ ] Turning right [ ] Slowing [ ] Accelerating [ ] Backing [ ] Changing lanes to right [ ] Other (specify): [ ] Changing lanes to left		
Did vehicle lose control due to weather or mechanical problems?	No . [ ] Unknown [ ] Yes (describe)		
Did driver take avoidance actions?  [	[ ] Braking with lock-up [ ] Accelerating [ ]Other (specify):    Marking without lock-up [ ] Steering left   [ ] Releasing brakes [ ] Steering right		
Where was vehicle at time of collision?	Original travel lane [ ] Different travel lane [ ] In intersection [ ] Off roadway to right [ ] Off roadway to left [ ] Other (specify):		
Can you estimate your travel speed at the time of collision? (in mph)	[ ] Stopped [ ] 11-20 X 31-40 [ ] 51-60 [ ] 70+ [ ] 1-10 [ ] 21-30 [ ] 41-50 [ ] 61-70 [ ] Unknown		
Describe all the impacts to the vehicle, including what the vehicle contacted) and how this vehicle moved to its stopped position, after the collision?			
What race does the driver consider themself?	[X] White [ ] American Indian, Eskimo or Aleut, Asian or Pacific Islander [ ] Black [ ] Other (specify):		
Is the driver of Hispanic origin?	[X] No [] Yes [] Unknown		

	ROLLOVER DATA	
OID THIS VEHICLE ROLL OVER DU  [ ] YES ASK THE FOLLON  [ ] NO SKIP TO "FIRE DA  [ ] UNKNOWN SKIP TO "	WING QUESTIONS TA" BELOW	
Describe where the rollover began	[ ] On roadway	[ ] On roadside or median
What caused the vehicle to roll over?	[ ] Other vehicle (specify vehicle number [ ] Contact to object (specify):	
Which direction did the vehicle roll?	[ ] Toward the right (passenger side) [ ] Toward the left (driver side) [ ] End-over-end [ ] Unknown	
Estimate the number of quarter turns each side) or complete turns (4 quarter turns) the vehicle did	Number of quarter turns [ ] Unk	nown
When the vehicle stopped rolling over, which side was in contact with the ground?	[ ] Left side [ ] Right side [ ] Unknown	[ ] Top [ ] Wheels
- 4 /	FIRE DATA	
Pescribe where the fire started, or where the smoke was first seen	OLLOWING QUESTIONS ECTION	[ ] In the trunk/cargo area [ ] Under the vehicle [ ] From other involved vehicle [ ] Unknown
[ ] YES ASK THE FOR A STATE OF THIS SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET	OLLOWING QUESTIONS ECTION THIS SECTION  [ ] Under the hood [ ] Behind the instrument panel	[ ] Under the vehicle [ ] From other involved vehicle
[ ] YES ASK THE FOR A STATE OF THIS SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET IN THE SET I	OLLOWING QUESTIONS ECTION  THIS SECTION  [ ] Under the hood [ ] Behind the instrument panel [ ] In the passenger compartment  [ ] No [ ] Yes (specify):	[ ] Under the vehicle [ ] From other involved vehicle

ADDITI	IONAL VEHICLE INFORMATION
IF THIS VEHICLE HAS NOT BEEN INSPECTED ASK THIS QUESTION:	Year: 19 Make:
What is the year, make and model of your vehicle?	Model:
Was there any damage to the vehicle that is not related to this crash?	[ ] Yes - describe:
Did any of the doors or hatch come open during the crash?	No   Yes - describe:   Unknown
Did any of the windows break during the crash?	[] No Partyes - describe: WS [] Unknown
Were any windows open (O) or partially open (P) prior to the crash?	[] No   Yes* * "O" = open "P" = partially open  [] WS [P] LF [] RF [] LR [] RR  [] BL [] Roof [] Other  [] Unknown
Did the glove compartment door come open during the crash?	[ ] No [ ] Yes - describe:  Unknown
Was there any cargo in the vehicle at the time of the crash?	[] No types - describe: GROCERIES  Approximate weight - <u>20-30</u> pounds 25 → 11. 3 kg  [] Unknown
Approximate mileage on the vehicle?	miles
Detail any notes, questions to ask directions to vehicle location here:	interviewee (i.e., rescue personnel damage to vehicle) or

SPECIAL CRASH INVE	STIGATION ADDENDUM: DRIVER INFORMATION
Do you recall the type of development in the area of the crash?	Residential  [ ] Industrial  [ ] Agricultural  [ ] Undeveloped  [ ] School  [ ] Other:
What were the weather conditions at the time of the crash?	Clear (no clouds, no precipitation)  [ ] Cloudy (partially cloudy, no precipitation)  [ ] Overcast (full cloud cover, no precipitation)  [ ] Precipitating [ ] Unknown
What was the type of pre- cipitation?	[X] No precipitation [ ] Unknown [ ] Raining [ ] Freezing rain [ ] Sleeting [ ] Snowing [ ] Hailing
What was the condition of the road surface?	<ul> <li>[ ] Dry [ ] Wet</li> <li>[ ] Snowy, slushy [ ] Icy</li> <li>[ ] Other (e.g., sand, dirt, oil on surface, etc.)</li> <li>[ ] Unknown</li> </ul>
How would you describe the amount of traffic at the time of the crash?	[ ] Heavy [X] Moderate [ ] Light [ ] No other traffic present
What is your occupation?	[ ] Professional [ ] Technical [ ] Government official [ ] Management [ ] Proprietors [ ] Sales [ ] Clerical [ ] Craftsman and foreman [ ] Service worker [ X Student [ ] Farmers and farm-managers [ ] Farm labors and foreman [ ] Private household worker [ ] Housewife [ ] Other: Nursing Student
How long have you driven this vehicle?	Years: Months: > 6 mo, < 1 y <
How many miles do you think that you have driven it in the last 12-month period?	Miles: un K
How often do you drive this particular roadway?	[ ] Daily [ ] Twice weekly [ ] Once weekly [ ] Twice monthly [ ] Once monthly [X] Very infrequently [ ] First time on road MY 2 ND TIME EN
Where were you coming from just prior to the crash?	[ ] Home [ ] Work [ ] School [ ] Shopping [ ] Social/recreational [ ] Restaurant [ ] Personal business [ ] Other:
Where were you intending to go when the crash occurred?	[] Home [] Work [] School [] Shopping Neces [] Social/recreational [] Restaurant [] Personal business [X] Other:

OCCUPANT DATA QUESTIONS			
low many people were in your vehicle at the	time of the crash?		
	DRIVER	OCCUPANT # 2	OCCUPANT # 3
Where was this person sitting in the vehicle?			
Front Left (FL) Second Left (2L) Front Middle (FM) Second Middle (2M) Front Right (FR) Second Right (2R)	FRONT LEFT	FR	21
Third Left (3L) Other (SPECIFY in block) Third Middle (3M) Third Right (3R)			
What is the Sex, Height, Weight, and Age of each occupant?	[ ] M [X] F - Not pregnant [ ] F - Pregnant - # of months [ ] F - Unk. if pregnant	[ ] M [ X] F - Not pregnant [ ] F - Pregnant - # of months [ ] F - Unk. if pregnant	F - Not pregnant F - Pregnant - # of months F - Unk, if pregnant
	HEIGHT: 54 WEIGHT: 150 AGE: 46	HEIGHT: 56 WEIGHT: 170 AGE: 26	HEIGHT: 52 WEIGHT: 130 AGE: 79
Describe how occupant was seated  A) Kneeling or standing on seat  B) Lying on or across seat	[ ] Leaning to laft [ ] Leaning to right [X] Sitting upright [ ] Unknown	[ ] Laaning to left [ ] Leaning to right [ ∑] Sitting upright [ ] Unknown	[ ] Leaning to left [ ] Leaning to right [ ] Sitting upright [ ] Unknown
C) Kneeling, standing or sitting in front of seat D) Sitting sideways, turned to side or back E) Sitting on console F) Lying back in reclined position G) Other (specify) H Unknown	Indicate all letters that apply and describe if other than above	Indicate all lettars that apply and dascribe if other than above	Indicate all letters that apply and describe if other than above
Describe feet and hands/arms location just prior to impact (indicate all that apply)	Indicate all latters that apply and further describe as needed	Indicate all lettars that apply and further describe as needad	Indicate all latters that apply and further dascribe as needed
A) On floor or foot controls B) One or both on dash C) One or both on seat D) Other (specify) E) Unknown	Death on beak	BEACEDH	Bath
HANDS / ARMS  F) Both hands on steering wheel	Both or	fee	h+
adjusting a control (specify hand on wheel and control involved)	E		man
Dialing a cellular phone (specify location and type of phone)     Holding a cellular phone (specify location and type of phone)			mant nave Braced
J) Bracing with one or both hands K) On lap L) One or both out of window (specify) M) Other (specify)			
Describe any additional information here  MY MOM IN BACK =	nded up or	(R) 51 DE	
OCCUPANI	DATA CONTINUED OF	NEXT PAGE	

	DRIVER	OCCUPANT # 2	OCCUPANT # 3
Was your / their back up against the seat back?	[ ] No (describe) [ ] Yes [ ] Unknown	[X] No (describe) [ ] Yes [ ] Unknown	No (describe)   Yes   No (describe)   Yes   No (describe)   No (describe)   No (describe)
		BEACING	maybe select
Does this seat position have an adjustable seat track, if so where was the seat located prior to impact?	<ul> <li>Not adjustable</li> <li>Seat all the way forward</li> <li>Between forward and middle</li> <li>At middle position</li> <li>Between middle and rear position</li> <li>Seat all the way rearward</li> <li>Unknown</li> </ul>	[ ] Not adjustable [ ] Seat all the way forward [ ] Between forward and middle [ ] At middle position Between middle and rear position [ ] Seat all the way rearward [ ] Unknown	Not adjustable  [ ] Seat all the way forward  [ ] Between forward and middle  [ ] At middle position  [ ] Between middle and rear position  [ ] Seat all the way rearward  [ ] Unknown
Does this seat position have an adjustable seat back, if so where was the seat back located prior to impact?	Not adjustable     Completely upright     Slightly reclined     Completely reclined	[ ] Not adjustable [ ] Completely upright [ ] Slightly reclined [ ] Completely reclined	[X] Not adjustable [ ] Completely upright [ ] Slightly reclined [ ] Completely reclined
If t'vis seat position has an ⊲djustable seat <i>back,</i> where was the seat <i>back</i> loc⊲ted after impact?	<ul> <li>Not adjustable</li> <li>Did not move (retained original position)</li> <li>Completely reclined</li> <li>Slightly reclined</li> <li>Completely upright</li> <li>Slightly forward of upright</li> <li>Completely forward</li> <li>Unknown</li> </ul>	[ ] Not adjustable [ ] Did not move (retained original position) [ ] Completely reclined [ ] Slightly reclined [ ] Completely upright [ ] Slightly forward of upright [ ] Completely forward [ ] Unknown	Not adjustable   Did not move (retained original position)   Completely reclined   Slightly reclined   Slightly reclined   Slightly forward of upright   Completely forward   Unknown
[ ] No [ ] Yes - describe type:	ny of the following? (c ing to another occupant (spe ig object in vehicle (specify):	hicle, flip phone, etc.)  y driver distractions without in  heck all that apply - and speciecify):	·
Dialing a cellular plant of the string radio. Classing other device Slcapy / asleep (a) Distracted by outs	control (specify): D or cassette player (specify or object in vehicle (specify	): ):	

	DRIVER	OCCUPANT # 🔌	OCCUPANT # 3
Pescribe the seat belt available for the seat position  NOTE: If a belt is not available for a seat position — describe if removed or not functional.	[ ] Unknown [ ] Lap belt [ ] Shoulder belt [ ] Lap & Shoulder [ ] Not available *  * Describe:	[ ] Unknown [ ] Lap belt [ ] Shoulder belt [ ] Lap & Shoulder [ ] Not available *  * Describe:	[ ] Unknown [ ] Lap belt [ ] Shoulder belt [ ] Lap & Shoulder [ ] Not available *  * Describe:
	[ ] Unknown [X] No [ ] Yes *  * If "Yes", were they working properly?  [ ] Yes [ ] No (describe):	[ ] Unknown [X] No [ ] Yes *  * If "Yes", were they working properly? [ ] Yes [ ] No (describe):	[ ] Unknown [ ] No [ ] Yes *  * If "Yes", were the working properly [ ] Yes [ ] No (describe):
	[ ] Unknown [X] No [ ] Yes *  * If "Yes", does it cross: Chest Lap Both	[ ] Unknown [◄] No [ ] Yes*  * If "Yes", does it cross: Chest Lap Both	[ ] Unknown [ ] No [ ] Yes *  * If "Yes", does it cross:  Chest Lap Both
Were you [and other occupant(s)] wearing a seat belt during the accident?	[ ] No [ ] Yes [ ] Unknown	No I Yes I Unknown	No [ ] Yes [ ] Unknown
SKIP THE FOLLOWI	NG IF NO SEA	T BELT WAS V	VORN

EJECTION, ENT	RAPMENT, MOBILITY	Y INFORMATION	
	DRIVER	OCCUPANT # 2	OCCUPANT # 3
Was any part of your body thrown outside the vehicle during the crash?	[ No [ ] Yes * [ ] Unknown  * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	No Yes * Unknown  If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	[ ] No [ ] Yes * [ ] Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.
Was anyone pinned in the vehicle?	No No No Nes Physically pinned Jammed doors Fire, etc.  Unknown  Detail any entrapment	No No No No No No No No No No No No No N	No No No No No No No No No No No No No N
How did you [and other occupant(s)] exit the vehicle?	[ ] Fatal before removed [ ] Removed while unconscious or disoriented [ ] Removed due to injuries [ ] Exited with some assistance [ XI Exited under own power [ ] Fully ejected [ ] Unknown	[ ] Fatal before removed [ ] Removed while unconscious or disoriented [ ] Removed due to injuries [ X Exited with some assistance [ ] Exited under own power [ ] Fully ejected [ ] Unknown	[ ] Fatal before removed [ ] Removed while unconscious or disoriented [ ] Removed due to injuries [ ] Exited with some assistance Exited under own power [ ] Fully ejected [ ] Unknown
Found my daughters  Found my daughters  My Daughter h	nt, or mobility informations  SSES IN FI  1+ 2 Holed	tion here:	CAR on 9Ro

AIR BAG INFORMATION				
WAS THIS VEHICLE EVER EQUIPPED WITH AN AIR BAG?  [ X ] YES (IF "YES" COMPLETE THIS SECTION)				
[ ] NO [ ] UNKNOWN	(IF "NO" OR "	UNKNOWN" SKIP TH	IS SECTION)	
	DRIVER SIDE FRONTAL	PASSENGER SIDE FRONTAL OCCUPANT #	"OTHER" AIR BAG SPECIFY:	
Had this vehicle been in any previous crashes?  [X] NO [ ] YES - continue to right [ ] UNKNOWN - go to box below	[ ] Prior crash without deployment [ ] One prior crash with deployment [ ] > 1, with at least one deployment [ ] Previous accident(s) unknown if deployed	<ul> <li>Prior crash without deployment</li> <li>One prior crash with deployment</li> <li>&gt;1, with at least one deployment</li> <li>Previous accident(s) unknown if deployed</li> </ul>	[ ] Prior crash without deployment [ ] One prior crash with deployment [ ] > 1, with at least one deployment [ ] Previous accident(s) unknown if deployed	
	IF PRIOR DEPLOYMENT  Output  I CHECK IF NOT  REINSTALLED	IF PRIOR DEPLOYMENT  [ ] CHECK IF NOT REINSTALLED	IF PRIOR DEPLOYMENT  CHECK IF NOT  REINSTALLED	
Type of air bag?	Original equipment I Retrofitted I Replacement I Unknown	Original equipment I Retrofitted I Replacement I Unknown	[ ] Original equipment [ ] Retrofitted [ ] Replacement [ ] Unknown	
Had any prior maintenance / service been performed on the air bag system?	No [ ] Unknown   Yes - Specify:	Y No [ ] Unknown [ ] Yes - Specify:	[ ] No [ ]Unknown [ ] Yes - Specify:	
Did the air bag inflate during this crash?	Yes [ ]Unknown [ ] No  If "NO" was the wiring disconnected prior to the crash?	Pyes [ ]Unknown [ ] No not buy Deployed If "NO" was the wiring disconnected prior to the crash?	[ ] Yes [ ]Unknown [ ] No  If "NO" was the wiring disconnected prior to the crash?	
Was the person in this position wearing any type of eye-wear? (Eyeglasses, sunglasses, contact lenses)	[] Yes [] No [] Unk [] No [] Unknown [] Yes - Specify:	[] Yes [] No [] Unk [] No [] Unknown [N] Yes - Specify:  54 NG/ASS	[ ] Yes [ ] No [ ] Unk [ ] No [ ] Unknown [ ] Yes - Specify:	
Was the air bag in this position contacted by another occupant?	No [ ] Unknown [ ] Yes - Specify:	No [ ] Unknown [ ] Yes - Specify:	[ ] No [ ] Unknown [ ] Yes - Specify:	
Describe any additional informat	ion here:			

Manufacturer and model of the safety seat?	[ X] NO [ ] !	DRIVER	OCCUPANT #	OCCUPANT #
Type of safety seat?				
What direction was it facing prior to the crash?	Type of safety seat?		[ ] Toddler [ ] Convertible [ ] Booster [ ] Integral [ ] Other Specify:	[ ] Toddler [ ] Convertible [ ] Booster [ ] Integral [ ] Other Specify:
Was a seat belt used to hold the seat in place?    [ ] No	_		[ ] Front [ ] Rearward	[ ] Front [ ] Rearward
framing studs  [ ] Looped through arm rest slots  [ ] Belt across safety shield  [ ] Looped through rear frame			[ ] No [ ] Yes	[ ] Yes
equipped with at time of purchase?  [ ] Shield [ ] Tether [ ] Unknown  [ ] Harness  [ ] Harness  [ ] Shield [ ] Tether [ ] Unknown  [ ] Unknown  [ ] Harness  [ ] Shield  [ ] Tether [ ] Unknown  [ ] Were any of these added after they owned the safety seat?  [ ] None [ ] Unknown  [ ] Unknown  [ ] Unknown			framing studs  [ ] Looped through arm rest slots [ ] Belt across safety shield [ ] Looped through rear frame / outside the designated framing struts [ ] Other (specify):	framing studs [ ] Looped through arm rest slots [ ] Belt across safety shield [ ] Looped through rear frame outside the designated framing struts [ ] Other (specify):
Were any of these added after they owned the safety seat?  [ ] Shield [ ] Tether [ ] Tether [ ] None [ ] None [ ] Unknown	equipped with at time of		[ ] Shield [ ] Tether	[ ] Shield [ ] Tether
Describe any additional information here:	after they owned the safety		[ ] Shield [ ] Tether [ ] None	[ ] Shield [ ] Tether [ ] None
	Describe any additional	informatio	on here:	

INJURY INFORMATION				
	. DRIVER	OCCUPANT # 2	OCCUPANT # 3	
Were you (or any other occupants) injured?  If "YES" go to manikin page and record injuries in detail	[ ] No [X] Yes [ ] Unknown	[ ] No	No  Yes  Unknown	
Did you (or any other occupants) receive any of the following:  (If any injuries are checked, go to the manikin page and record location, lesion, and source)	[ ] Cuts [ ] Abrasions [ ] Bruises [ ] Broken bones [ ] Head, skull, brain [ ] Internal injury [ ] Sprains, strains [ ] Other (specify): Durns SORCOness	[ ] Cuts [ ] Abrasions [ ] Bruises [ ] Broken bones [ ] Head, skull, brain [ ] Internal injury [ ] Sprains, strains [ ] Other (specify):	[ ] Cuts [ ] Abrasions [ ] Bruises [ ] Broken bones [ ] Head, skull, brain [ ] Internal injury [ ] Sprains, strains [ ] Other (specify): 50Len@SS	
			HER (ED) (HAINEZ/VOER)	
Did you (or any other occupants) receive any medical treatment?  (check all that apply)	[ ] Hospital [ ] Medical clinic [ ] Paramedics at scene  [ ] Doctor's office [ ] Treated by self [ ] Unknown	Hospital    Hospital   Medical clinic   Paramedics at scene   Doctor's office   Treated by self   Unknown	[ ] Hospital [ ] Medical clinic [ ] Paramedics at scene [ ] Doctor's office [ ] Treated by self [ ] Unknown	
Were you (or any other occupants) hospitalized?	No [] Yes - number of days  [] Unknown  [X] No	[ ] No [ ] Yes - number of days [ ] Unknown [ ] No	No   Yes - number of days   Unknown   No	
Were you (or any other occupants) treated and released from the emergency room?	[] Yes [] Unknown	Yes Unknown	[ ] Yes [ ] Unknown	
Name of medical treatment facility?	DE /	Hosp		
Have you (or any other occupants) received any follow-up treatment?	No [] Yes - describe:	I No  K) Yes describe:  GOING FOA OL  CAT SCAN  JUST to V nota  I Unknown YET	No [ ] Yes - describe:  ' [ ] Unknown	
Have you (or any other occupants) lost any days from work or school (college) due to the crash?	No Not working prior to crash Section 1 Yes - number of days Section 2 Unknown	[ ] No [ ] Not working prior to crash [ ] Yes - number of days [ ] Unknown	No Not working prior to crash Yes - number of days  Unknown	
IF REQUIRED: Will you sign a medical release?	[ ] No [ ] Yes* [ ] Unknown	[ ] No [ ] Yes* [ ] Unknown	[ ] No [ ] Yes* [ ] Unknown	
* If not an in-person interview, make appointment to have release signed	DATE: TIME: PLACE:	DATE: TIME: PLACE:	DATE: TIME: PLACE:	

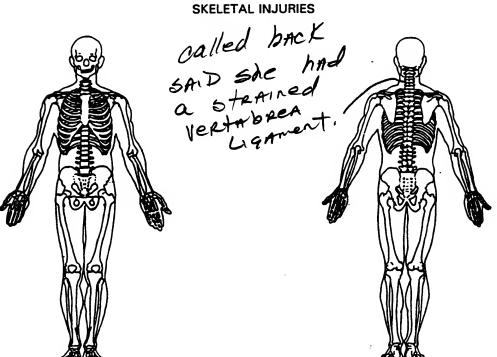
Case Number - Stratum 9517

Vehicle Number <u>O</u> / Occupant Number O /

#### INJURY DATA FROM INTERVIEWEE(S)

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):

SOFT TISSUE/INTERNAL INJURIES

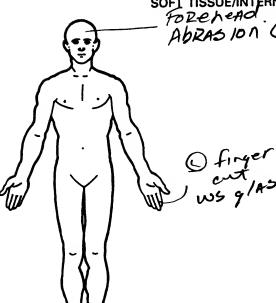


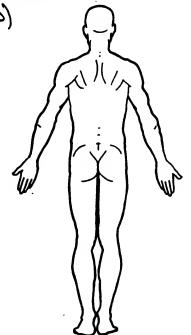
Case Number-Stratum 9519 Vehicle Number 01

Occupant Number 22

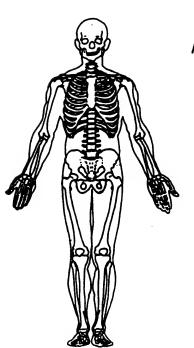
### INJURY DATA FROM INTERVIEWEE(S)

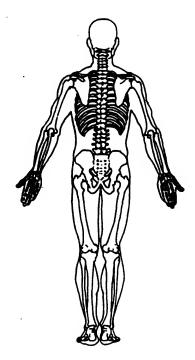
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):





**SKELETAL INJURIES** 





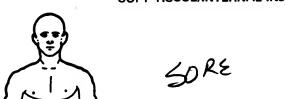


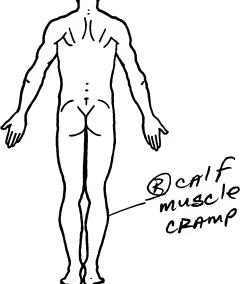
PSU Number 10 Case Number-Stratum 9517 Vehicle Number 01

Occupant Number <u>0</u>3

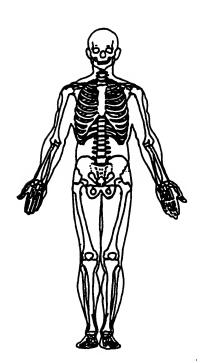
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): \_\_\_

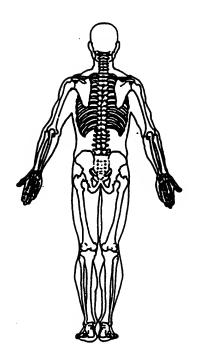
SOFT TISSUE/INTERNAL INJURIES





**SKELETAL INJURIES** 





# Appendix G:

NASS CDS INTERVIEW FORM:

VEHICLE #2 DRIVER

National Highway Traffic Safety Administration

#### **INTERVIEW FORM (A)**

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number 100 2. Case Number - Stratum 9517	Interviewee(s) Role or Name(s):  DRIVER of this VEh
3. Vehicle Number	
Review all available information and interview q acquisition of all pertinent data.	uestions prior to conducting interview(s) to ensure the
	as an appointment made for a follow-up interview?
DRIVER'S DESCRI	PTION OF ACCIDENT EVENTS
I was crossing A truck was turn blocking my vie saw car then	ning B down my street w. I shall out
OCCUPANT'S DESC	CRIPTION OF ACCIDENT EVENTS
How did your car Ended up to	ions to ask interviewee  endup  action East: 10 median.
ENGEO UP 10	ACITY ENSITY IN MEDITION

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4		`	GRA	-11.1



The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the environment.

**NORTH** 

CRASH DATA INFORMATION				
IF DOSSIRI F OR	TAIN THIS INFORMATION FROM THE DRIVER:			
SOURCE OF INFORMATION:	[ ] Driver [ ] Other occupant [ ] Relativa/friend			
In which direction were you traveling?	[ ] North South [ ] East [ ] West (Or where ware they coming from or going to?)			
What lane were you in?	[ ] 2 [ ] 3 [ ] 4 [ ] Other  Note: lane 1 is the right curb lane			
What was the condition of the roadway?	Dry [ ] Wet [ ] Snow [ ] Slush [ ] Ice [ ] Sand, dirt, oil [ ] Othar (specify)			
What was the weather like? (Check all that apply)	No adverse conditions [ ] Rain [ ] Fog [ ] Sleet [ ] Hail [ ] Snow [ ] Other (specify)			
Was there any type of sign or signal present?  (check all that apply)	Traffic control signal (includes flashing beacons, iane control signals, and green / amber / rad signal)  Stop sign [] Yiald sign [] School zone sign  [] Other regulatory sign (No "U" turn, left turn only, wrong way, atc.) specify:  [] Warning sign (Winding road sign, stop ahead, intersection signs, atc.) specify:  [] Miscallanaous control (including railroad controls) specify:  [] Nona [] Unknown			
If a traffic control device was present, was it functioning properly at the time of the crash?	[ ] No traffic control davica present [ ] Not functioning proparly (includas defaced, badly worn, covered with snow, rotated etc.) specify:			
Can you estimate your travel speed before the crash? (in mph)	[ ] Stopped			
Just before the crash, what were you doing or intending to do? (check all that apply)	Going straight [ ] Stopped [ ] Turning left [ ] Turning right [ ] Slowing [ ] Accalerating [ ] Backing [ ] Changing lanes to right [ ] Other (specify): [ ] Changing lanas to left			
Did vehicle lose control due to weather or mechanical problems?	No . [ ] Unknown [ ] Yes (describe)			
Did driver take avoidance actions?  [X] Yes (Check all that apply) →  [ ] No [ ] Unknown	[ ] Braking with lock-up    [ ] Braking without lock-up    [ ] Steering left    [ ] Releasing brakas    [ ] Steering right			
Where was vehicle at time of collision?	[ ] Original traval lana [ ] Diffarant traval lana [ ] In intersaction [ ] Off roadway to right [ ] Off roadway to laft [ ] Other (specify):			
Can you estimate your travel speed at the time of collision? (in mph)	[ ] Stopped D( 11-20 [ ] 31-40 [ ] 51-60 [ ] 70+ [ ] 1-10 [ ] 21-30 [ ] 41-50 [ ] 61-70 [ ] Unknown			
Describe all the impacts to the vehicle, including what the vehicle contacted) and how this vehicle moved to its stopped position, after the collision?				
What race does the driver consider themself?	[X] White [ ] American Indian, Eskimo or Aleut, Asian or Pacific Islander [ ] Black [ ] Other (specify):			
Is the driver of Hispanic origin?	No [] Yes [] Unknown			

	ROLLOVER DATA	
OID THIS VEHICLE ROLL OVER DU	JRING THE CRASH?	
[ ] YES ASK THE FOLLOW [ ] NO SKIP TO "FIRE DA [ ] UNKNOWN SKIP TO "	WING QUESTIONS	
Describe where the rollover began	[ ] On roadway [ ] On shoulder [ ] Unknown	[ ] On roadside or median
What caused the vehicle to roll over?	[ ] Other vehicle (specify vehicle numbers) [ ] Contact to object (specify): [ ] Other cause (specify): [ ] Unknown	
Which direction did the vehicle roll?	[ ] Toward the right (passenger side) [ ] Toward the left (driver side) [ ] End-over-end [ ] Unknown	
Estimate the number of quarter turns each side) or complete turns (4 quarter turns) the vehicle did	Number of quarter turns [ ] Un	known
When the vehicle stopped rolling over, which side was in contact with the ground?	[ ] Left side [ ] Right side [ ] Unknown	[ ] Top [ ] Wheels
4 9 2	FIRE DATA	
[ ] YES ASK THE F  [ ] NO SKIP THIS S  [ ] UNKNOWN SKII  Describe where the fire started, or where the smoke was first seen	OLLOWING QUESTIONS	[ ] In the trunk/cargo area [ ] Under the vehicle [ ] From other involved vehicle [ ] Unknown
Did the fire start with the electrical system?	[ ] No [ ] Yes (specify): [ ] Unknown	
Did the fire start with the fuel system?	[ ] No [ ] Yes (specify): [ ] Unknown	
	[4] Fuel tank	Mario de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de

PAGE 3

ADDITI	ONAL VEHICLE INFORMATION
IF THIS VEHICLE HAS NOT BEEN INSPECTED ASK THIS QUESTION:	Year: 19 Make:
What is the year, make and model of your vehicle?	Model:
Was there any damage to the vehicle that is not related to this crash?	No [ ] Yes - describe: [ ] Unknown
Did any of the doors or hatch come open during the crash?	Yes - describe:  [ ] Unknown
Did any of the windows break during the crash?	[] Unknown DR DOOT
Were any windows open (0) or partially open (P) prior to the crash?	[ ] No [ ] Yes* * "O" = open "P" = partially open  [ ] WS
Did the glove compartment door come open during the crash?	No [ ] Yes - describe: [ ] Unknown
Was there any cargo in the vehicle at the time of the crash?	[] No to Yes - describe:  Approximate weight - 15 pounds → 6,8 kg  [] Unknown Book BAC
Approximate mileage on the vehicle?	miles
	enting percentage of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
Detail any notes, questions to ask directions to vehicle location here:	interviewee (i.e., rescue personnel damage to vehicle) or

Special Crash Inve	ESTIGATION ADDENDUM: DRIVER INFORMATION
Do you recall the type of development in the area of the crash?	Residential  [ ] Industrial   [ ] Agricultural   [ ] Undeveloped   [ ] School   [ ] Other:
What were the weather conditions at the time of the crash?	Clear (no clouds, no precipitation)  Cloudy (partially cloudy, no precipitation)  Overcast (full cloud cover, no precipitation)  Drecipitating  Unknown
What was the type of precipitation?	[ ] No precipitation [ ] Unknown [ ] Raining [ ] Freezing rain [ ] Sleeting [ ] Snowing [ ] Hailing
What was the condition of the road surface?	Dry [ ] Wet [ ] Snowy, slushy [ ] Icy [ ] Other (e.g., sand, dirt, oil on surface, etc.) [ ] Unknown
How would you describe the amount of traffic at the time of the crash?	[ ] Heavy [ ] Moderate [ ] Light [ ] No other traffic present
What is your occupation?	[ ] Professional [ ] Technical [ ] Government official [ ] Management [ ] Proprietors [ ] Sales [ ] Clerical [ ] Craftsman and foreman [ ] Service worker [ ] Student [ ] Farmers and farm-managers [ ] Farm labors and foreman [ ] Private household worker [ ] Housewife [ ] Other:
How long have you driven this vehicle?	Years: Months:
How many miles do you think that you have driven it in the last 12-month period?	Miles:
How often do you drive this particular roadway?	Daily [ ] Twice weekly [ ] Once weekly [ ] Twice monthly [ ] Once monthly [ ] Very infrequently [ ] First time on road
Where were you coming from just prior to the crash?	Home [ ] Work [ ] School [ ] Shopping [ ] Social/recreational [ ] Restaurant [ ] Personal business [ ] Other:
Where were you intending to go when the crash occurred?	[ ] Home [ ] Work [ ] School

ow many people were in your vehicle at the t	DRIVER	OCCUPANT #	OCCUPANT #
Where was this person sitting in the vehicle?			
Front Left (FL) Second Left (2L) Front Middle (FM) Second Middle (2M) Front Right (FR) Second Right (2R)	FRONT LEFT		
Third Left (3L) Other (SPECIFY in block) Third Middle (3M) Third Right (3R)			
What is the Sex, Height, Weight, and Age of each occupant?	[ ] M [X] F - Not pragnant [ ] F - Pregnant - # of months [ ] F - Unk. if pragnant  HEIGHT:	[ ] M [ ] F - Not pregnant [ ] F - Pregnant - # of months [ ] F - Unk. if pregnant  HEIGHT: WEIGHT:	[ ] M [ ] F - Not pregnant [ ] F - Pregnant - # c months [ ] F - Unk. if pregnant HEIGHT: WEIGHT:
	AGE:	AGE:	AGE:
Describe how occupant was seated  A) Kneeling or standing on seat  B) Lying on or across seat  C) Kneeling, standing or sitting in front of seat	[ ] Leaning to left [ ] Leaning to right [ ] Sitting upright [ ] Unknown	[ ] Laaning to left [ ] Laaning to right [ ] Sitting upright [ ] Unknown	[ ] Leaning to left [ ] Leaning to right [ ] Sitting upright [ ] Unknown
C) Kneeling, standing or sitting in front of seat D) Sitting sideways, turned to side or back E) Sitting on consola E) Lying back in reclined position C) Other (specify) H Unknown	Indicate all latters that apply and dascribe if other than above	Indicate all letters that apply and describe if other than above	Indicate all letters tha apply and describe if other than above
Describe feet and hands/arms location just prior to impact (indicate all that apply)	Indicata all latters that apply and further dascribe as naaded	Indicate all letters that apply and further dascriba as needad	Indicate all letters that apply and further dascribe as needad
FEET  A) On floor or foot controls	lancas		
3) One or both on dash	lon gas		
C) One or both on seat D) Other (specify) E) Unknown	10n floor		
HANDS / ARMS			
F) Both hands on steering wheel G) One on wheel, other hand resting or			
adjusting a control (specify hand on wheel			
and control involved)  H) Dialing a cellular phone (specify location and			
type of phone)  Holding e cellular phone (specify location and type of phone)			
J) Bracing with one or both hands			
K) On lep L) One or both out of window (specify)	-00		
M) Other (specify) N) Unknown			

OCCUPANT DATA CONTINUED ON NEXT PAGE

	DRIVER	OCCUPANT #	OCCUPANT #
Was your / their back up against the seat back?	No (describe) [ ] Yes [ ] Unknown	[ ] No (describe) [ ] Yes [ ] Unknown	[ ] No (describe) [ ] Yes [ ] Unknown
Does this seat position have an adjustable seat track, if so where was the seat located prior to impact?	[ ] Not adjustable [ ] Seat all the way forward Between forward and middle [ ] At middle position [ ] Between middle and rear position [ ] Seat all the way rearward [ ] Unknown	[ ] Not adjustable [ ] Seat all the way forward [ ] Between forward and middle [ ] At middle position [ ] Between middle and rear position [ ] Seat all the way rearward [ ] Unknown	[ ] Not adjustable [ ] Seat all the way forward [ ] Between forward and middle [ ] At middle position [ ] Between middle and rear position [ ] Seat all the way rearward [ ] Unknown
Does this seat position have an adjustable seat back, if so where was the seat back located prior to impact?	Not adjustable	[ ] Not adjustable [ ] Completely upright [ ] Slightly reclined [ ] Completely reclined	Not adjustable     Completely upright     Slightly reclined     Completely reclined
If this seat position has an adjustable seat <i>back,</i> where was the seat <i>back</i> loc∈ted after impact?	Not adjustable  [ ] Did not move (retained original position)  [ ] Completely reclined  [ ] Slightly reclined  [ ] Completely upright  [ ] Slightly forward of upright  [ ] Completely forward  [ ] Unknown	[ ] Not adjustable [ ] Did not move (retained original position) [ ] Completely reclined [ ] Slightly reclined [ ] Completely upright [ ] Slightly forward of upright [ ] Completely forward [ ] Unknown	[ ] Not adjustable [ ] Did not move (retained original position) [ ] Completely reclined [ ] Slightly reclined [ ] Completely upright [ ] Slightly forward of uprigh [ ] Completely forward [ ] Unknown
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[ ] Talking to or lister [ ] Was there a movin [ ] Talking or listening [ ] Dialing a cellular p [ ] Adjusting climate [ ] Adjusting radio. C [ ] Using other decice [ ] Slcapy / asleep (3)	ing to another occupant (speng object in vehicle (specify); on a cellular phone (specify); control (specify); D or cassatte player (specify); or object in vehicle (specify); ide person, object, or event (specify);	ecify): : y): y): y):	

	DRIVER	OCCUPANT #	OCCUPANT #
Describe the seat belt available for the seat position  NOTE: If a belt is not available for a seat position — describe if removed or not functional.	[ ] Unknown [ ] Lap belt [ ] Shoulder belt [ Lap & Shoulder [ ] Not available *	[ ] Unknown [ ] Lap belt [ ] Shoulder belt [ ] Lap & Shoulder [ ] Not available *  * Describe:	[ ] Unknown [ ] Lap belt [ ] Shoulder belt [ ] Lap & Shoulder [ ] Not available *  * Describe:
	[ ]/Unknown [X No [ Yes *	[ ] Unknown [ ] No [ ] Yes *	[ ] Unknown [ ] No [ ] Yes *
	* If "Yes", were they working properly?  [ ] Yes [ ] No (describe):	* If "Yes", were they working properly?  [ ] Yes [ ] No (describe):	* If "Yes", were they working properly?  [ ] Yes  [ ] No (describe):
	[ ] Unknown [ ] No [ ] Yes *  * If "Yes", does it cross:	[ ] Unknown [ ] No [ ] Yes * * tf "Yes", does it cross: Chest	[ ] Unknown [ ] No [ ] Yes* * If "Yes", does it cross:
	Lap Both	Lap Both	Lap Both
Were you [and other occupant(s)] wearing a seat belt during the accident?	[ ] No Yes [ ] Unknown	[ ] No [ ] Yes [ ] Unknown	[ ] No [ ] Yes [ ] Unknown
SKIP THE FOLLOWI	NG IF NO SEA	T BELT WAS V	VORN
		And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	
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EJECTION, ENTRAPMENT, MOBILITY INFORMATION					
	DRIVER	OCCUPANT #	OCCUPANT #		
Was any part of your body thrown outside the vehicle during the crash?	No   Yes *   Unknown   If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	[ ] No [ ] Yes * [ ] Unknown  * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	[ ] No [ ] Yes * [ ] Unknown  * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.		
Was anyone pinned in the vehicle?	No   Yes   physically pinned   jammed doors   fire, etc.   Unknown   Detail any entrapment	[ ] No [ ] Yesphysicelly pinnedjammed doorsfire, etc. [ ] Unknown Detail any entrapment	[ ] No [ ] Yesphysically pinnedjammed doorsfire, etc. [ ] Unknown Detail any entrapment		
How did you [and other occupant(s)] exit the vehicle?	[ ] Fatal before removed [ ] Removed while unconscious or disoriented [ ] Removed due to injuries [ ] Exited with some assistance Exited under own power [ ] Fully ejected [ ] Unknown	[ ] Fatal before removed [ ] Removed while unconscious or disoriented [ ] Removed due to injuries [ ] Exited with some assistance [ ] Exited under own power [ ] Fully ejected [ ] Unknown	[ ] Fatal before removed [ ] Removed while unconscious or disoriented [ ] Removed due to injuries [ ] Exited with some assistance [ ] Exited under own power [ ] Fully ejected [ ] Unknown		
Further describe any ejection, entrapmen					

#### AIR BAG INFORMATION WAS THIS VEHICLE EVER EQUIPPED WITH AN AIR BAG? (IF "YES" COMPLETE THIS SECTION) 1 NO (IF "NO" OR "UNKNOWN" SKIP THIS SECTION) ] UNKNOWN "OTHER" AIR BAG **DRIVER SIDE** PASSENGER SIDE SPECIFY: FRONTAL FRONTAL OCCUPANT # OCCUPANT # [ ] Prior crash without [ ] Prior crash without [ ] Prior crash without Had this vehicle been in any previous deployment deployment deployment crashes? [ ] One prior crash with [ ] One prior crash with [ ] One prior crash with deployment deployment deployment NO [] > 1, with at least [ ] >1, with at least [ ] >1, with at least one 1 YES - continue to right one deployment one deployment deployment UNKNOWN - go to box below [ ] Previous accident(s) [ ] Previous accident(s) [ ] Previous accident(s) unknown if deployed unknown if deployed unknown if deployed IF PRIOR DEPLOYMENT IF PRIOR DEPLOYMENT IF PRIOR DEPLOYMENT [ ] CHECK IF NOT [ ] CHECK IF NOT [ ] CHECK IF NOT REINSTALLED REINSTALLED REINSTALLED [ ] Original equipment [ ] Original equipment [ ] Original equipment Type of air bag? [ ] Retrofitted [ ] Retrofitted [ ] Retrofitted [ ] Replacement [ ] Replacement [ ] Replacement [ ] Unknown [ ] Unknown [ ] Unknown []No []Unknown [ ] No [ ] Unknown [] No []Unknown Had any prior maintenance / service [ ] Yes - Specify: [ ] Yes - Specify: [ ] Yes - Specify: been performed on the air bag system? [ ] Yes [ ]Unknown [ ] Yes [ ]Unknown [ ] Yes [ ]Unknown [ ] No [ ] No [ ] No Did the air bag inflate during this crash? If "NO" was the If "NO" was the If "NO" was the wiring disconnected wiring disconnected wiring disconnected prior to the crash? prior to the crash? prior to the crash? [ ] Yes [ ] No [ ] Unk [ ] Yes [ ] No [ ] Unk [ ] Yes [ ] No [ ] Unk Was the person in this position LNo [ ] Unknown [] No [] Unknown []No []Unknown wearing any type of eye-wear? Yes - Specify: [ ] Yes - Specify: [ ] Yes - Specify: (Eyeglasses, sunglasses, contact controts lenses) [] No [] Unknown []No []Unknown []No []Unknown [ ] Yes - Specify: Was the air bag in this position [ ] Yes - Specify: [ ] Yes - Specify: contacted by another occupant? Describe any additional information here:

Manufacturer and model of the safety seat?	[X] NO [ ] [	DRIVER	OCCUPANT #	OCCUPANT #
Toddler     Toddler     Toddler     Toddler     Toddler     Convertible   Dosster	Manufacturer and model of the safety seat?			
What direction was it facing prior to the crash?  [ ] Front [ ] Rearward [ ] Unknown  Was a seat belt used to hold the seat in place?  [ ] Vo [ ] Yes [ ] Unknown  [ ] Looped through designated rear framing studs [ ] Looped through arm rest slots [ ] Belt across safety shield [ ] Looped through rear frame outside the designated framing struts [ ] Other (specify): [ ] Unknown  What was the safety seat equipped with at time of  [ ] Harness [ ] Harness [ ] Shield  [ ] Harness [ ] Shield	Type of safety seat?		[ ] Toddler [ ] Convertible [ ] Booster [ ] Integral [ ] Other Specify:	[ ] Toddler [ ] Convertible [ ] Booster [ ] Integral [ ] Other Specify:
The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the seat in place?   The control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control o			[ ] Front [ ] Rearward	[ ] Front [ ] Rearward
framing studs  [ ] Looped through arm rest slots  [ ] Belt across safety shield  [ ] Looped through rear frame outside the designated framing struts  [ ] Other (specify): [ ] Unknown  [ ] Harness  [ ] Harness  [ ] Shield  [ ] Looped through arm rest slots  [ ] Looped through rear frame outside the designated framing struts  [ ] Other (specify): [ ] Unknown  [ ] Harness  [ ] Shield			[ ] No [ ] Yes	[ ] Yes
equipped with at time of [ ] Shield [ ] Shield	How was the seat belt secured to the child seat?		framing studs [ ] Looped through arm rest slots [ ] Belt across safety shield [ ] Looped through rear frame outside the designated framing struts [ ] Other (specify):	Looped through arm rest slots     Belt across safety shield     Looped through rear frame     outside the designated framin     struts     Other (specify):
[ ] Unknown	What was the safety seat equipped with at time of purchase?		[ ] Shield [ ] Tether	[ ] Shield [ ] Tether
Were any of these added after they owned the safety seat?  [ ] Harness [ ] Shield [ ] Shield [ ] Tether [ ] None [ ] None [ ] Unknown	after they owned the safety		[ ] Shield [ ] Tether [ ] None	[ ] Shield [ ] Tether [ ] None

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INJURY INFORMATION						
	DRIVER	OCCUPANT #	OCCUPANT #			
Were you (or any other occupants) injured?  If "YES" go to manikin page and record injuries in detail  If "NO" ask next questions	[ ] No Yes [ ] Unknown	[ ] No [ ] Yes [ ] Unknown	[ ] No [ ] Yes [ ] Unknown			
Did you (or any other occupants) receive any of the following:  (If any injuries are checked, go to the manikin page and record location, lesion, and source)	[ ] Cuts Abrasions [ ] Bruises [ ] Broken bones [ ] Head, skull, brain [ ] Internal injury [ ] Sprains, strains [ ] Other (specify):	[ ] Cuts [ ] Abrasions [ ] Bruises [ ] Broken bones [ ] Head, skull, brain [ ] Internal injury [ ] Sprains, strains [ ] Other (specify):	[ ] Cuts [ ] Abrasions [ ] Bruises [ ] Broken bones [ ] Head, skull, brain [ ] Internal injury [ ] Sprains, strains [ ] Other (specify):			
		1996	IE (ED)			
Did you (or any other occupants) receive any medical treatment?  (check all that apply)	[ ] Hospital [ ] Medical clinic [ ] Paramedics at scene [ ] Doctor's office Treated by self [ ] Unknown	[ ] Hospital [ ] Medical clinic [ ] Paramedics at scene [ ] Doctor's office [ ] Treated by self [ ] Unknown	[ ] Hospital [ ] Medical clinic [ ] Paramedics at scene [ ] Doctor's office [ ] Treated by self [ ] Unknown			
Were you (or any other occupants) hospitalized?	No [ ] Yes - number of days [ ] Unknown	[ ] No [ ] Yes - number of days [ ] Unknown	[ ] No [ ] Yes - number of days [ ] Unknown			
Were you (or any other occupants) treated and released from the emergency room?	No [ ) Yes [ ] Unknown	[ ] No [ ] Yes [ ] Unknown	[ ] No [ ] Yes [ ] Unknown			
Name of medical treatment facility?	N/A					
Have you (or any other occupants) received any follow-up treatment?	No [ ] Yes - describe:	[ ] No [ ] Yes - describe:	[ ] No [ ] Yes - describe:			
Have you (or any other occupants) lost any days from work or school (college) due to the crash?	No [ ] Not working prior to crash [ ] Yes - number of days [ ] Unknown	[ ] No [ ] Not working prior to crash [ ] Yes - number of days [ ] Unknown	[ ] No [ ] Not working prior to crash [ ] Yes - number of days [ ] Unknown			
IF REQUIRED: Will you sign a medical release?	[ ] No [ ] Yes* [ ] Unknown	[ ] No [ ] Yes* [ ] Unknown	[ ] No [ ] Yes* [ ] Unknown			
* If not an in-person interview, make appointment to have release signed	DATE: TIME: PLACE:	DATE: TIME: PLACE:	DATE: TIME: PLACE:			

Case Number-Stratum

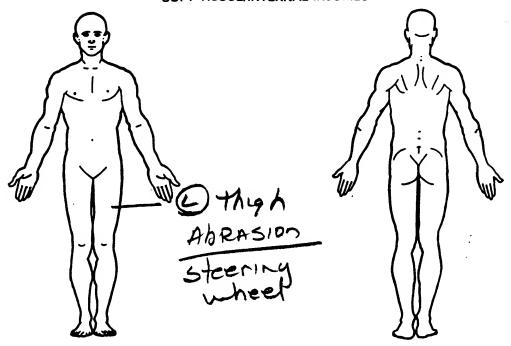
Vehicle Number

Occupant Number

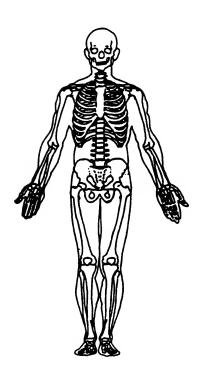
### INJURY DATA FROM INTERVIEWEE(S)

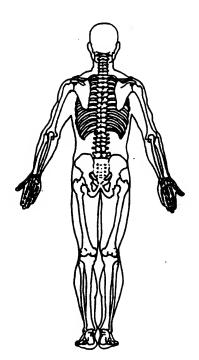
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):

#### SOFT TISSUE/INTERNAL INJURIES



**SKELETAL INJURIES** 





PSU Number / O Case Number-Stratum

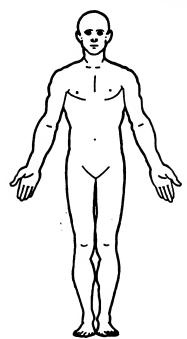
Vehicle Number \_\_\_

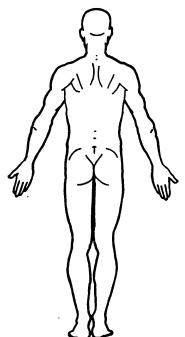
\_\_\_ Occupant Number \_\_\_

#### INJURY DATA FROM INTERVIEWEE(S)

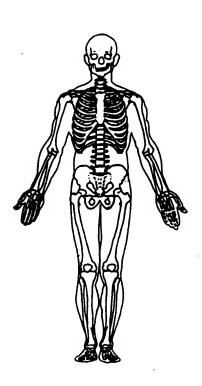
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):

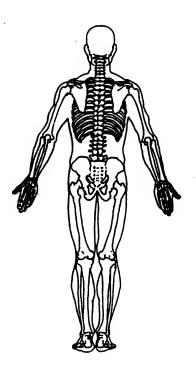
#### SOFT TISSUE/INTERNAL INJURIES





**SKELETAL INJURIES** 





Case Number - Stratum

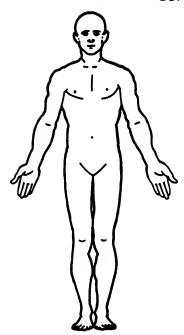
Vehicle Number \_

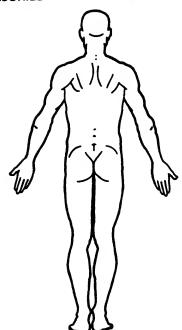
Occupant Number

### INJURY DATA FROM INTERVIEWEE(S)

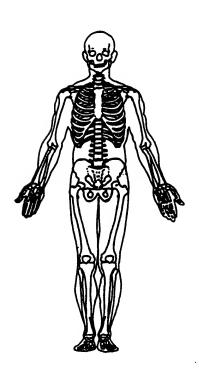
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):

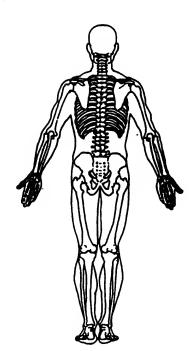
#### SOFT TISSUE/INTERNAL INJURIES





#### **SKELETAL INJURIES**





# Appendix H:

NASS CDS OCCUPANT ASSESSMENT FORM:

CASE VEHICLE DRIVER



U.S. Department of Transportation

National Highway Traffic Safety

### OCCUPANT ASSESSMENT FORM

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

April and the second	OCCUPANT'S SEATING
1. Primary Sampling Unit Number	A Secretary Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annual Annu
2. Case Number - Stratum 9 5 1 7	10. Occupant's Seat Position//
3. Vehicle Number	(11) Left side (12) Middle
4. Occupant Number	(13) Right side
OCCUPANT'S CHARACTERISTICS	(14) Other (specify):(15) On or in the lap of another occupant
	(15) On or in the lap of another occupant
5. Occupant's Age Code actual age at time of accident. (00) Less than one year old (specify by month):  (97) 97 years and older (99) Unknown	Second Seat (21) Left side (22) Middle (23) Right side (24) Other (specify):
6. Occupant's Sex (1) Male (2) Female-not reported pregnant (3) Female-pregnant-1st trimester(1st-3rd month) (4) Female-pregnant-2nd trimester(4th-6th month) (5) Female-pregnant-3rd trimester(7th-9th month) (6) Female-pregnant-term unknown (9) Unknown	Third Seat (31) Left side (32) Middle (33) Right side (34) Other (specify): (35) On or in the lap of another occupant  Fourth Seat (41) Left side (42) Middle (43) Right side (44) Other (specify): (45) On or in the lap of another occupant
7. Occupant's Height Code actual height to the nearest centimeter. (999) Unknown  64 inches x 2.54 = 162 centimeters	(97) In or on unenclosed area (98) Other seat (specify): (99) Unknown
8. Occupant's Weight Code actual weight to the nearest kilogram. (999)Unknown  / 50 pounds x .4536 = // 8 kilograms  9. Occupant's Role (1) Driver (2) Passenger (9) Unknown	11. Occupant's Posture (0) Normal posture  Abnormal posture (1) Kneeling or standing on seat (2) Lying on or across seat (3) Kneeling, standing or sitting in front of seat (4) Sitting sideways or turned to talk with another occupant or to look out a rear window (5) Sitting on a console (6) Lying back in a reclined seat position (7) Bracing with feet or hands on a surface in front of seat (8) Other abnormal posture (specify): (9) Unknown

EJE	ECTION/EI	NTRAPMENT
12. Ejection (0) No ejection (1) Complete ejection (2) Partial ejection (3) Ejection, unknown degree (9) Unknown	0	15. Medium Status (Immediately Prior To Impact) O (0) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown
13. Ejection Area (0) No ejection (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear (7) Roof (8) Other area (e.g., back of pickup, etc. (specify): (9) Unknown	.)	16. Entrapment (0) Not entrapped/exit not inhibited (1) Entrapped/pinned - mechanically restrained (2) Could not exit vehicle due to jammed doors, fire, etc. (specify):  (9) Unknown  17. Occupant Mobility (0) Occupant fatal before removed from vehicle (1) Removed from vehicle while unconscious or disoriented (2) Removed from vehicle due to injuries (3) Exited vehicle with some assistance (4) Exited vehicle under own power
(1) Door/hatch/tailgate (2) Nonfixed roof structure (3) Fixed glazing (4) Nonfixed glazing (specify):  (5) Integral structure (8) Other medium (specify):  (9) Unknown		(5) Occupant fully ejected (9) Unknown

BELT SYSTEM FUNCTION				
18. Manual (Active) Belt System Availability (0) None available (1) Belt removed/destroyed (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt available—type unknown  Integral Belt Partially Destroyed (6) Shoulder belt (lap belt destroyed/removed) (7) Lap belt (shoulder belt destroyed/removed) (8) Other belt (specify): (9) Unknown	22. Shoulder Belt Upper Anchorage Adjustment (0) No shoulder belt (1) No upper anchorage adjustment for shoulder belt  Adjustable shoulder Belt Upper Anchorage (2) In full up position (3) In mid position (4) In full down position (5) Position unknown (9) Unknown if position has adjustable upper anchorage adjustment  23. Automatic (Passive) Belt System Availability/ Function (9) Note assisted feet available			
19. Manual (Active) Belt System Use (00) None used, not available, or belt removed/destroyed (01) Inoperative (specify):  (02) Shoulder belt (03) Lap belt (04) Lap and shoulder belt (05) Belt used—type unknown (08) Other belt used (specify):  (12) Shoulder belt used with child safety seat (13) Lap belt used with child safety seat (14) Lap and shoulder belt used with child safety seat (15) Belt used with child safety seat—type unknown (18) Other belt used with child safety seat (specify): (99) Unknown if belt used	(0) Not equipped/not available (1) 2 point automatic belts (2) 3 point automatic belts (3) Automatic belts - type unknown  Non-functional (4) Automatic belts destroyed or rendered inoperative (9) Unknown  24. Automatic (Passive) Belt System Use (0) Not equipped/not available/destroyed or rendered inoperative (1) Automatic belt in use (2) Automatic belt in use (manually disconnected, motorized track inoperative) (specify): (3) Automatic belt use unknown (9) Unknown  25. Automatic (Passive) Belt System Type (0) Not equipped/not available (1) Non-motorized system			
20. Proper Use of Manual (Active) Belts (0) None used or not available (1) Belt used properly (2) Belt used properly with child safety seat  Belt Used Improperly (3) Shoulder belt worn under arm (4) Shoulder belt worn behind back or seat (5) Belt worn around more than one person (6) Lap belt worn on abdomen (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): (8) Other improper use of manual belt system (specify): (9) Unknown  21. Manual (Active) Belt Failure Modes During Accident (0) No manual belt failure(s) (1) No manual belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other manual belt failure (specify):	(2) Motorized system (9) Unknown  26. Proper Use of Automatic (Passive) Belt System (0) Not equipped/not available/not used (1) Automatic belt used properly (2) Automatic belt used properly with child safety seat  Automatic Belt Used Improperly (3) Automatic shoulder belt worn under arm (4) Automatic shoulder belt worn behind back (5) Automatic belt worn around more than one person (6) Lap portion of automatic belt worn on abdomen (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):  (8) Other improper use of automatic belt system (specify): (9) Unknown  27. Automatic (Passive) Belt Failure Modes During Accident (0) Not equipped/not available/not in use (1) No automatic belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other automatic belt failure (specify):			
	(9) Unknown			

POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
28. Police Reported Belt Use  (0) None used (1) Police did not indicate belt use (2) Shoulder belt (3) Lap belt	30. Frontal Air Bag System Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag
(4) Lap and shoulder belt (5) Belt used, type not specified (6) Child safety seat (7) Automatic belt (8) Other type belt, (specify):  (9) Police indicated "unknown"	Non-functional (2) Air bag disconnected (specify):  (3) Air bag not reinstalled (9) Unknown  31. Frontal Air Bag System Deployment (This Occupant Position)
29. Police Reported Air Bag Availability/Function (0) No air bag available (1) Police did not indicate air bag availability/function (2) Deployed (3) Not deployed (4) Unknown if deployed (9) Police indicated "unknown"	<ul> <li>(0) Not equipped/not available</li> <li>(1) Deployed during accident (as a result of impact)</li> <li>(2) Deployed inadvertently just prior to accident</li> <li>(3) Deployed, details unknown</li> <li>(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)</li> <li>(5) Unknown if deployed</li> <li>(7) Nondeployed</li> <li>(9) Unknown</li> </ul>
Check the Primary Source Used In Determining Belt Use.  [ ] Not equipped/not available/destroyed or rendered inoperative [ ] Vehicle inspection [ ] Official injury data [ X Driver/occupant interview [ ] Other (specify): [ ] Unknown if belt used	32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag  Non-functional (2) Air bag disconnected (specify):  (3) Air bag not reinstalled (9) Unknown Specify type of *other* air bag present:
	33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown  34. Are There Indications of Air Bag System Failure? (This Occupant Position) (0) Not equipped/not available (1) No (2) Yes (specify):

FIRST SEAT FRONTAL AIR	BAG SYSTEM EVALUATION
35. Had Vehicle Been in Previous Accident(s)?  (0) Not equipped/not available (1) No previous accidents   Yes (2) Previous accident(s) without deployment(s) (3) One previous accident with deployment (4) More than one previous accident with at least one deployment (8) Previous accidents, unknown deployment status (9) Unknown	40. Longitudinal Component of Delta V For Air Bag Deployment Impact ( 000) Not equipped/not available Code the value of the delta V for the impact that initiated the air bag deployment ( 996) Deployment, unknown longitudinal Delta V ( 997) Not deployed ( 998) Unknown if deployed ( 999) Unknown
36. Type of Air Bag (0) Not equipped/not available (1) Original manufacturer installed system (2) Retrofitted air bag (3) Replacement air bag (8) Unknown type of air bag (9) Unknown	41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? (0) Not equipped/not available (1) No (2) Yes (3) Deployed, unknown if flap(s) opened at designated tear points (7) Not deployed (8) Unknown if deployed
37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? (0) Not equipped/not available (1) No prior maintenance (2) Yes, prior maintenance (specify): (9) Unknown  38. Air Bag Deployment Accident Event Sequence Number (00) Not equipped/not available	(9) Unknown  42. Were Air Bag Module Cover Flap(s) Damaged?  (0) Not equipped/not available  (1) No  (2) Yes (specify):  (3) Deployed, unknown if air bag module cover flap(s) damaged  (7) Not deployed  (8) Unknown if deployed  (9) Unknown
Code the accident event sequence number that initiated the air bag deployment  (96) Deployed, unknown event  (97) Not deployed  (98) Unknown if deployed  (99) Unknown	43. Was There Damage To The Air Bag? (00) Not equipped/not available (01) Not damaged  Yes - Air Bag Damage (02) Ruptured (03) Cut (04) Torn
39. CDC For Air Bag Deployment Impact (0) Not equipped/not available (1) Highest delta V (2) Second highest delta V (3) Other non-coded delta V (specify):  (6) Deployed, unknown event (7) Not deployed (8) Unknown if deployed (9) Unknown	(05) Holed (06) Burned (07) Abraded (88) Other damage (specify):  (95) Damaged, details unknown (96) Deployed, unknown if damaged (97) Not deployed (98) Unknown if deployed (99) Unknown

	FIRST SEAT FRONTAL AIR BAG SYSTEM	HEAD RESTRAINT AND SEAT EVALUATION
		49. Head Restraint Type/Damage by Occupant 3
44	Source of Air Bag Damage	at This Occupant Position
44.	(00) Not equipped/not available	(O) No head restraints
	(O1) Not damaged	(1) Integral—no damage
	(02) Object worn by occupant, (specify):	(2) Integral—damaged during accident
ŀ		(3) Adjustable—no damage
	(03) Object carried by occupant, (specify):	(4) Adjustable—damaged during accident
	(00) 00)001 0011101 1 1 1 1 1 1 1 1 1 1 1	(5) Add-on—no damage
	(04) Adaptive/assistive controls, (specify):	(6) Add-on—damaged during accident
	(o // / (o p	(8) Other (specify):
	(05) Fire in vehicle	<u> </u>
l	(06) Thermal burns	(9) Unknown
1	(07) Rescue or emergency efforts	2
	(88) Other damage source (specify):	50. Seat Type (this Occupant Position)
		(OO) Occupant not seated or no seat
	(95) Damaged, unknown source	(O1) Bucket
	(96) Deployed, unknown if damaged	(02) Bucket with folding back
	(97) Not deployed	(O3) Bench
l	(98) Unknown if deployed	(04) Bench with separate beck cushions
	(99) Unknown	(05) Bench with folding back(s)
		(06) Split bench with separate back cushions
45	Was The Air Bag Tethered?	(07) Split bench with folding back(s)
45.	(0) Not equipped/not available	(08) Pedestal (i.e., column supported)
	(1) No	(09) Box mounted seat (i.e., van type)
	(1) No (2) Yes (specify number of tether straps):	(10) Other seat type (specify):
1	(2) 165 (Specify Humber of tetric, etteps).	
1	(3) Deployed, unknown if tethered	(99) Unknown
1	(7) Not deployed	1
1	(8) Unknown if deployed	51. Seat Orientation (this Occupant Position)
	(9) Unknown	(0) Occupant not seated or no seat
1	· · ·	(1) Forward facing seat
46.	Did The Air Bag Have Vent Ports?	(2) Rear facing seat
1	(0) Not equipped/not availeble	(3) Side facing seat (inward)
1	(1) No	(4) Side facing seat (outward)
1	(2) Yes (specify number of vent ports):	(8) Other (specify):
1	- A	(O) Universe
	(3) Deployed, unknown if vent ports present	(9) Unknown
1	(7) Not deployed	En Core Track Adjusted Basitian Brian To Impact 3
1	(8) Unknown if deployed	52. Seat Treck Adjusted Position Prior To Impact 3
	(9) Unknown	(0) Occupant not seated or no seat
	At the Air Boy in this Occupant's Bosition	(1) Non-adjustable seat treck
47.	Wes the Air Bag in this Occupent's Position	Adimental Cost Track
1	Contacted by Another Occupant?	Adjustable Seat Track (2) Seat et forward most track position
i	(0) Not equipped/not available	(2) Seat et forward most track position (3) Seat between forward most and middle track
1	(1) No	
1	(2) Yes (specify):	positions (4) Seet at middle track position
1	(3) Deployed, unknown if other occupant contact	(4) Seat at middle track position (5) Seat between middle and reer most track
1		T T T T T T T T T T T T T T T T T T T
	to air bag	positions (6) Seet at year most track position
	(7) Not deployed	(6) Seat at rear most track position (9) Unknown
	(8) Unknown if deployed	(a) Olikilowii
1	(9) Unknown	
1	When This Occupant Westing Eug Wage?	
48.	Was This Occupant Wearing Eye-wear?	
1	(O) Not equipped/not evailable	
1	(1) No	
	(2) Eyegiasses/sungiasses	
	(3) Contact lenses	
1	(4) Deployed, unknown if eyewear worn	1
	(7) Not deployed	
	(8) Unknown if deployed	
1	(9) Unknown	

	HEAD RESTRAINT AND SE	AT EVALUATION continued
53.	Seat Back Incline Prior and Post Impact (00) Occupant not seated or no seat (01) Not adjustable	
	Upright prior to impact (11) Moved to completely rearward position (12) Moved to rearward midrange position (13) Moved to slightly rearward position (14) Retained pre-impact position (15) Moved to slightly forward position (16) Moved to forward midrange position (17) Moved to completely forward position	15 14 13
	Slightly reclined prior to impact (21) Moved to completely rearward position (22) Moved to rearward midrange position (23) Retained pre-impact position (24) Moved to upright position (25) Moved to slightly forward position (26) Moved to forward midrange position (27) Moved to completely forward position	25 <sup>24</sup> 23 27
	Completely reclined prior to impact (31) Retained pre-impact position (32) Moved to rearward midrange position (33) Moved to slightly rearward position (34) Moved to upright position (35) Moved to slightly forward position (36) Moved to forward midrange position (37) Moved to completely forward position (99) Unknown	35 <sup>34</sup> 33 37
54.	Seat Performance (this Occupant Position) (0) Occupant not seated or no seat (1) No seat performance failure(s) (2) Seat adjusters failed (3) Seat back folding locks or "seat back" failed (specify): (4) Seat track/anchors failed (5) Deformed by impact of occupant (6) Deformed by passenger compartment intrusion, (specify):	-
	(7) Combination of above (specify):	
	(8) Other (specify):(9) Unknown	

	CHILD S	AFET	Y SE	AT	
55.	Child Safety Seat Make/Model (000) No child safety seat	_ 58.	. Child	Safety Seat Harness Usage	00
	Applicable codes are found in your NASS CDS  Data Collection, Coding and Editing  (950) Built-in child safety seat	59.	. Child	Safety Seat Shield Usage	00
	(997) Other make/model (specify):	60.	. Child	Safety Seat Tether Usage	00
	(998) Unknown make/model (999) Unknown if child safety seat used		Varia	Options below applicable to bles OA58-OA60.  No child safety seat	
56.	Type of Child Safety Seat	_		•	
	(0) No child safety seat			Designed With Harness/Shield/Te	
	(1) Infant seat		(01)	After market harness/shield/teth added, not used	ier
	(2) Toddler seat (3) Convertible seat		(02)	After market harness/shield/teth	er used
	(4) Booster seat - with shield	ı		Child safety seat used, but no a	
	(5) Booster seat - without shield			harness/shield/tether added	
	(7) Other type child safety seat (specify):		(09)	Unknown if harness/shield/tethe added or used	ır
	(8) Unknown child safety seat type		Doois	nned With Harness/Shield/Tether	
	(9) Unknown if child safety seat used			Harness/shield/tether not used	
				Harness/shield/tether used	
57.	Child Safety Seat Orientation (00) No child safety seat	-	• •	Unknown if harness/shield/tethe	
		1		own If Designed With Harness/S	hield/Tether
	Designed for Rear Facing for This Age/Weight		• •	Harness/shield/tether not used	
	(01) Rear facing (02) Forward facing			Harness/shield/tether used Unknown if harness/shield/tethe	rused
	(08) Other orientation (specify):		(23)	Onknown ii namess/smeid/tethe	,, 0,500
	(oo) one change (openly)		(99)	Unknown if child safety seat us	ed
	(09) Unknown orientation				
	Designed For Forward Facing for This Age/Weight				
	(11) Rear facing	İ			
	(12) Forward facing				
	(18) Other orientation (specify):	ı			
	(19) Unknown orientation				
	Unknown Design or Orientation For This			•	
	Age/Weight, or Unknown Age/Weight				
	(21) Rear facing				
	(22) Forward facing				
	(28) Other orientation (specify):				
	(29) Unknown orientation				
	(99) Unknown if child safety seat used				
		- 1			

INJURY CONSEQUENCES	
61. Injury Severity (Police Rating)  (0) O - No injury (1) C - Possible injury (2) B - Nonincapacitating injury (3) A - Incapacitating injury (4) K - Killed (5) U - Injury, severity unknown (6) Died prior to accident (9) Unknown	63. Type Of Medical Facility (for Initial Treatment)  (0) Not treated at a medical facility (1) Trauma center (2) Hospital (3) Medical clinic (4) Physician's office (5) Treatment later at medical facility (8) Other (specify):
62. Treatment - Mortality (0) No treatment (1) Fatal (2) Fatal - ruled disease (specify):	64. Hospital Stay (00) Not Hospitalized Code the number of days (up through 60) that the occupant stayed in hospital. (61) 61 days or more
Nonfatal (3) Hospitalization (4) Transported and released (5) Treatment at scene - nontransported (6) Treatment later (7) Treatment - other (specify):  (8) Transported to a medical facility-unknown if treated (9) Unknown	(99) Unknown  65. Working Days Lost  Code the number of days  (up through 60) that the occupant lost from work due to the accident (00) No working days lost (61) 61 days or more (62) Fatally injured (97) Not working prior to accident (99) Unknown
	ORK HERE LES 66-74
TO BE CODED BY	THE ZONE CENTER

### TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES	TRAUMA DATA
Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, n days = 30 + n up through 30 days = 60)  (OO) Not fatal  (96) Fatal - ruled disease  (99) Unknown	71. Glasgow Coma Scale (GCS) Score (at Medical Facility) (00) Not injured (01) Injured - not treated at medical facility (02) No GCS Score at medical facility (03-15) Code the actual value of the initial GCS Score recorded at medical facility. (97) Injured, details unknown (99) Unknown if injured
67. 1st Medically Reported Cause of Death	72. Was the Occupant Given Blood? (1) No - blood not given (2) Yes - blood given (specify units):
69. 3rd Medically Reported Cause of Death  Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death (00) Not fatal or no additional causes (96) Mode of death given but specific injuries are not linked to cause of death. (specify):	(9) Unknown if blood given  73. Arterial Blood Gases (ABG) – HCO <sub>3</sub> (00) Not injured (01) Injured, ABGs not measured or reported (02-50) Code the actual value of the HCO <sub>3</sub> (96) ABGs reported, HCO <sub>3</sub> unknown (97) Injured, details unknown (99) Unknown if injured
(97) Other result (includes fatal ruled disease) (specify):	BELT USE DETERMINATION
70. Number of Recorded Injuries for This Occupant Code the actual number of injuries recorded for this occupant. (00) No recorded injuries (97) Injured, details unknown (99) Unknown if injured	74. Primary Source of Belt Use Determination (0) Not equipped/not available/destroyed or rendered inoperative (1) Vehicle inspection (2) Official injury data (3) Driver/occupant interview (8) Other (specify): (9) Unknown if belt used

# Appendix I:

NASS CDS OCCUPANT INJURY FORM:

CASE VEHICLE DRIVER

U.S. Department of Transportation National Highwey Traffic Safety

**OCCUPANT INJURY FORM** 

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

4 D. Carralina Hait Number	10	3. Vehicle Number	0 1
1. Primary Sampling Unit Number			0 1
2 Case Number - Stratum	517	4. Occupant Number	01

# **INJURY DATA**

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	-				A.I.S !	90				Injury	D:/	Occupant
		Source of Injury Data	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Source Confidence Level	Direct/ Indirect Injury	Area Intrusion Number
bila	ns to teral		6. <u>7</u>	7. 9	<u>. 20</u>	900	10/	11. 3 12.	604	13. 2	14. <u>3</u>	15. <u>0</u> <u>0</u>
,	uical in		17. <u>6</u>	18. <u>4</u> 19	. <u>0 2</u>	20. <u>7</u> 8	21/	22. 6 23.	. <u>/70</u>	24. 2	252	<sub>26.</sub> <u>0</u> <u>0</u>
	3rd	27	28	29 30	o	31	32	33 34.	·	35	36	37
	4th	38	39	40 4	1	42	43	44 45.	·	46	47	48
	5th	49	50	51 5	2	53	54	55 56	·	57	58	59
	6th	60	61	62 6	3	64	65	66 67	·	68	69	70
	7th	71	72	73 7	4	75	76	77 78	B	79	80	81
	8th	82	83	84 8	5	86	87	88 89	)	90	91	92
	9th	93	94	95 9	6	97	98	99 100	)	101 1	02 1	103
	10th	104	105	106 10	7	108	109	110 111	1	112 1	13	114

				occi	JPANT	NJURY	DATA				
	Source of Injury Data	Body Region	Type of Anatomic Structure	A.I.S 90 Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
11th				<del></del> _			_		. —		
12th		<del></del>				_	_				
13th	<del></del>		_			_	_		_	_	
14th		_					_		_	_	
15 <b>t</b> h	_	_	_		<del></del>	_	_		_	<del></del>	
16th	<del>-</del> .	_	_			_	_		_		
1 7th	_	_	_			_	<del></del>		_	_	
18th		<del></del>	_			_	_		_	_	
19th	_	_				_	_		_	_	
20th	_	_	_			_	_			_	<u>_</u>
21st	_	_	_				_		· —	*	
22nd	_	_	_			_	•		_	_	
23rd		_	_			<del></del>			<u>·</u>	_	
24th	_	_	_	<del></del>		_	_		_	_	
25th	_	_	· · · ·						-		

# OCCUPANT INJURY CLASSIFICATION

#### **Aspect** Specific Anatomic Level of Injury **Body Region** Structure Right Specific injuries are (1)Head Left assigned consecutive (2)Face (2) two-digit numbers Bilateral (3) (3) Vessels, Nerves, Organs. Neck beginning with 02. Central Bones, Joints are assigned (4)(4)Thorax (5) Anterior Abdomen consecutive two digit (5) (6)**Posterior** To the extent possible, numbers beginning with (6) Spine **Upper Extremity** within the organizational (7)Superior (7)framework of the AIS, 00 (8)Inferior (8) Lower Extremity is assigned to an injury (9) Unknown The exceptions to this rule Unspecified (9) (0) Whole region NFS as to severity or apply to: where only one injury is given in the dictionary for Type of Anatomic Whole Area (O2) Skin - Abrasion that anatomic structure. Structure (04) Skin - Contusion 99 is assigned to any injury NFS as to lesion or (06) Skin - Laceration Whole Area (1) (08) Skin - Avulsion severity. (2) Vessels (10) Amputation (3) Nerves (4) Organs (includes (20)Burn Abbreviated Injury Scale (30) Crush Muscles/ligaments) (40)Degloving Minor Injury Skeletal (includes (1)(5) Moderate Injury Injury - NFS (2)ioints) (50)(3) Serious Injury (90) Trauma, other than Head - LOC (6) Severe Injury mechanical (4) (9) Skin (5) Critical Injury Maximum Head - LOC (6) (untreatable) (02) Length of LOC (7)Injured, unknown severity (04) Level (06) of (08) Consciousness

### **SOURCE OF INJURY DATA**

# INJURY SOURCE CONFIDENCE LEVEL

### DIRECT/INDIRECT INJURY

# OFFICIAL RECORDS (1) Autopsy records with or

without hospital/medical records

(2) Hospital/medical records other than emergency room (e.g., discharge summary)

(3) Emergency room records only (including associated X-rays or other lab reports)

(4) Private physician, walk-in or emergency clinic

#### **UNOFFICIAL RECORDS**

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify):
- (9) Police

(1) Certain

(10) Concussion

Cervical

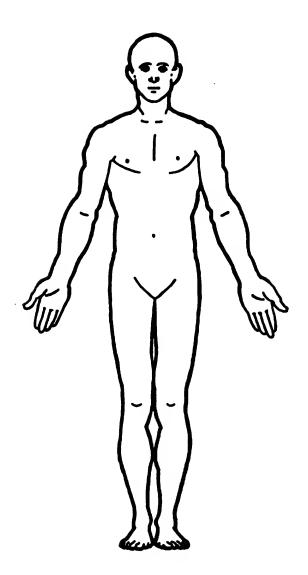
(04) Thoracic (06) Lumbar

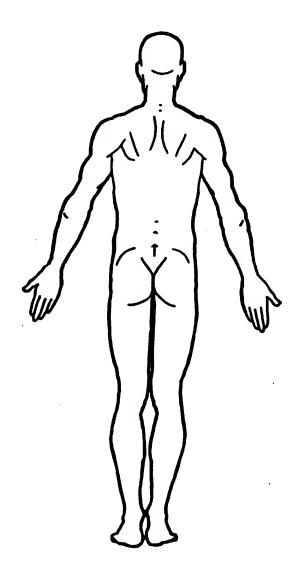
**Spine** 

(02)

- (2) Probable
- (3) Possible
- (9) Unknown

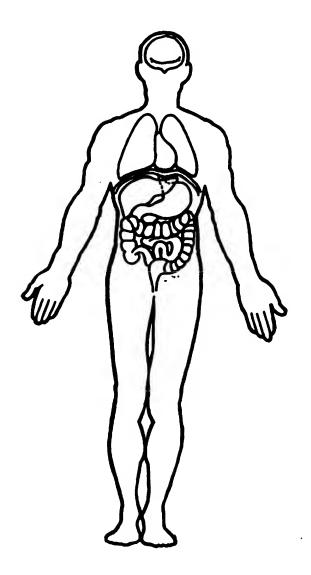
- Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- Injured, unknown source

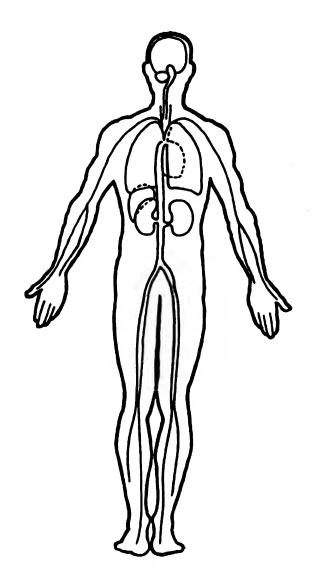




	OFFICIAL INJURY DATA	A — SKELETAL INJURIES
Restrained? No Yes	Indicate the Location, Specific Anatomic Structure, Detail (size, dep Source of all injuries indicated by official sources (or from PAR or of unavailable.)	oth, fracture type, head injury clinical signs and neurological deficits), and other unofficial sources if medical records and interviewee data are
Blood Alcohol Level (mg/dl) BAL =	bodo	
Glasgow Coma Scale Score GCSS =		
Units of Blood Given Units =		
Arterial Blood Gases  pH = PO <sub>2</sub> =		
РСО₃		

			INJURY !		OLO .		
FRONT		(102)	Right side hardware or	(183)	Air beg-passenger side end	(411)	Wall mounted heed rest
	Windshield		armrest		object held		(used behind wheel chair)
	Mirror	(103)	Right A (A1/A2)-pillar	(184)	Air beg-passenger side and	(412)	Other adaptive device
	Sunvisor	(104)	Right B-pillar		object in mouth		(specify):
	Steening wheel rim	(105)	Other right piller (specify):	(185)	Air bag compartment		
	Steering wheel hub/spoke				cover-passenger side		
	Steering wheel (combination	(106)	Right side window glass	(186)	Air beg compartment	EXTER	RIOR of OCCUPANT'S
	of codes 004 and 005)		Right side window frame		cover-pessenger side and	VEHIC	LE
(007)	Steering column,		Right side window sill		eyewear	(451)	Hood
0071	transmission selector lever,		Right side window glass	(187)	Air beg compartment	(452)	Outside hardware te.g.,
	other attachment	(100)	including one or more of the		cover-passenger side and		outside mirror, antenna)
000	Cellular telephone or CB		following: frame, window		iewelry	(453)	Other exterior surface or
0001	redio		sill, A (A1/A2)-pillar, B-pillar,	(188)	Air beg compartment		tiras (specify):
000			or roof side reil.		cover-passenger side and		
0091	Add on equipment (e.g.,	(110)	Other right side object		object hald		
	tepe deck, air conditioner)	(110)	-	(189)	Air bag compartment	(454)	Unknown extenor objects
(010)	Left instrument panel and		(specify):	(100,	cover-passenger side and	, , ,	
	below				object in mouth	CYTE	RIOR OF OTHER MOTOR
011)	Center instrument penel end	******	100	(100)	Other eir beg (specify)	VEHIC	
	below	INTER		(190)	Other en beg (specify)		Front bumper
012)	Right instrument panel and		Seet, back support	(105)	Other air has comestions	•	·
	below	(152)	Belt restraint	(185)	Other air bag compartment		Other from of webiele
	Glove compartment door		webbing/buckle		cover (specify)	(503)	Other front of vehicle
(014)	Knee boister	(153)	Belt restraint 8-pillar or door				(specify):
(015)	Windshield including one or		frame attachment point				
	more of the following: front	(154)	Other restraint system	ROOF			Hood
	header, A (A1/A2)-pillar,		component (spacify):	(201)	Front heeder		Hood ornament
	instrument panel, mirror, or			(202)	Rear heeder	(506)	Windshield, roof rail, A-pilla
	steering assembly (driver	(155)	Head restraint system	(203)	Roof left side rail	(507)	Side surface
	side only)	(160)	Other occupents (specify):	(204)	Roof right side rail	(508)	Side mirrors
016	Windshield including one or			(205)	Roof or convertible top	(509)	Other side protrusions
	more of the following: front	(161)	Interior loose objects				(specify):
	header, A (A1/A2)-pillar,	(162)	Child sefety seat (specify):	FLOOI	۹		
	instrument panel, or mirror		•	(251)	Floor (including toe pan)	(510)	Rear surfeca
	(passenger side only)	(163)	Other interior object	(252)	Floor or console mounted	(511)	Undercarriage
(017)	Windshiald reinforced by	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(specify):		transmission lever, including	(512)	Tires and wheels
(017)	exterior object (specify)		(1000.17)		console	(513)	Other exterior of other
	exterior object (specify)			(253)	Perking breke handle		motor vehicle (specify):
	Orber from object (appoint):	AIR B	A.G.		Foot controls including		
(019)	Other front object (specify):		_	(201)	parking breke		
			Air bag-driver side		perking breke	(514)	Unknown exterior of other
		(171)	Air bag-driver side and	REAR		(314)	motor vehicle
LEFT S	· · · · ·	4470	eyewear		Backlight (sees window)		motor venicle
(051)	Left side interior surface,	(172)	Air bag-driver side and		Backlight (reer window)	OTHE	R VEHICLE OR OBJECT IN
	excluding hardware or		jewelry	(302)	Backlight storage rack,		
	armrests	(173)	Air bag-driver side and	,	door, etc.		NVIRONMENT
(052)	Left side hardware or		object held	(303)	Other reer object (specify):		Ground
	ermrest	(174)	Air beg-driver side end			(598)	Other vehicle or object
(053)	Left A (A1/A2)-pillar		object in mouth				(specify):
(054)	Left B-piller	(175)	Air bag compartment		TIVE (ASSISTIVE) DRIVING		
(055)	Other left pillar (specify):		cover-driver side	EQUIF	MENT	(599)	Unknown vehicle or object
		(176)	Air beg compertment	(401)	Hand controls for		
(056)	Left side window gless		cover-driver side and		braking/acceleration	NONC	ONTACT INJURY
	Left side window frame		eyeweer	(402)	Steering control devices	(601)	Fire in vehicle
-	Left side window sill	(177)	Air beg compartment		(attached to OEM steering	(602)	Flying glass
	Left side window glass		cover-driver side and jewelry		wheel)		Other noncontact injury
	including one or more of the	(178)	Air bag compartment	(403)	Steering knob attached to		Source
	following: frame, window		cover-driver side and object		steering wheel		(specify):
	-		held	(AOS)	Replacement steering wheel	(604)	Air beg exhaust geses
	sill, A (A1/A2)-pillar, B-piller,	(170)		,-001	(i.e., reduced diameter)		Injured, unknown source
	or roof side rail.	(1/8)	Air bag compartment	1406		.03/1	
(060)	Other left side object		cover-driver side and object		Joy stick steering controls		
	(specify):		in mouth		Wheelcheir tie-downs		
			Air beg-passenger sida	(408)	Modification to seat belts,		
		(181)	Air bag-passenger side and		(specify):		
RIGHT	SIDE		eyewear	(409)	Additional or relocated		
	Right side interior surface,	(182)	Air bag-passenger side and		switches, (specify):		
(101)							
(101)	excluding hardware or		jewelry				





	CAUSE OF DEATH						
		•					
		ICD·9·CM					
		OTHER DRUGS (GV16)					
Specin	nen Test Type	Drug(s)	Drug Type				
	od and urine tests						
	od test only ne test only						
	er test						
Uns	pecified						
			/ - /				
	- 3						
1		·					
	i						
		MEDICAL RECORD ABBREVIATIONS					
Symbol		Record Type Description	in the second				
A	Autopsy-medical information b	ased upon an invasive examination of a body ere the information reported on the patient is based on a n	on-invasive examination of the body				
ME AR	Admission record/summary-an	y medical information on this record should be considered	as post-EK since it summarizes the				
	and a listing of surplical treatme	ds are common in short hospitalizations and usually only cents; ICD-9-CM codes are frequently available.					
FS	information as discussed share	-face sheets are essentially the same as admission record/st					
D6	Discharge summary-shorten his	story of a patient's hospitalization highlighting the patient' its author which in many cases is a consultant	s major injuries; this record is often				
06	Onesetine record and market	a restormed surviced operation after providing detailed inf	formation about a specific trauma; pa-				
	results from an outpatient sure	are normally admitted; thus, this record is normally considery, then treat it as emergency-room related					
双	Padicamanhic recordentaken afi	ter the patient has been admitted, or while in surgery or is sental record containing additional nurses notes taken after	stensive care • the patient's admission				
PN HP	History and physical exam-med	lical history and the results of the physical exam obtained	by the emergency room physician as-				
CN	signed to the patient upon arriv Consultation record-consultation	one are in essence additional history and physicial exams po	erformed by doctors whose expertise was				
	requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission						
EN	EN Emergency room nurse-"nurse/complaint of" section on the emergency room report						
ED	eency room report)						
NN	NN Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)						
EX CV	Coroner's verdict-statement of	cause of death for legal specific regarding injuries; care n	oust be exercised to ascertain the creden-				
CR	tials of the verdict's author.  Coroner's report-medical infor	mation based upon a noninvasive examination performed	by a person who is not a doctor but who				
	has the title of a coroner	•					
. pr	has the title of a coroner  Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)						
ET O	Emergency medical technician- Other source-medical informat	report by a person who qualifies as an emergency medical ion based on an other source (e.g., newspaper, DVM-Doc	tor of Veterinary Medicine)				

# Appendix J:

NASS CDS OCCUPANT ASSESSMENT FORM:

CASE VEHICLE RIGHT FRONT PASSENGER



### U.S. Department of Transportation

# **OCCUPANT ASSESSMENT FORM**

Form Approved O.M.B. No. 2127-0021

National Highway Traffic Safety Administration	NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM
1.0	OCCUPANT'S SEATING
1. Primary Sampling Unit Number	10. Occupant's Seat Position 13
2. Case Number - Stratum 9517	Front Seat
3. Vehicle Number	(11) Left side
<u> </u>	(12) Middle (13) Right side
4. Occupant Number O 2	(14) Other (specify):
OCCUPANT'S CHARACTERISTICS	(15) On or in the lap of another occupant
5. Occupant's Age Code actual age at time of accident. (00) Less than one year old (specify by month):  (97) 97 years and older (99) Unknown	Second Seat (21) Left side (22) Middle (23) Right side (24) Other (specify): (25) On or in the lap of another occupant
6. Occupant's Sex (1) Male (2) Female-not reported pregnant (3) Female-pregnant-1st trimester(1st-3rd month) (4) Female-pregnant-2nd trimester(4th-6th month) (5) Female-pregnant-3rd trimester(7th-9th month) (6) Female-pregnant-term unknown (9) Unknown	Third Seat (31) Left side (32) Middle (33) Right side (34) Other (specify): (35) On or in the lap of another occupant  Fourth Seat (41) Left side (42) Middle (43) Right side (44) Other (specify):
7. Occupant's Height Code actual height to the nearest centimeter. (999) Unknown  Lete inches X 2.54 = 167 centimeters	(45) On or in the lap of another occupant  (97) In or on unenclosed area (98) Other seat (specify):  (99) Unknown
8. Occupant's Weight Code actual weight to the nearest kilogram. (999)Unknown  170 pounds x .4536 = 77 kilograms  9. Occupant's Role (1) Driver (2) Passenger (9) Unknown	11. Occupant's Posture (0) Normal posture  Abnormal posture (1) Kneeling or standing on seat (2) Lying on or across seat (3) Kneeling, standing or sitting in front of seat (4) Sitting sideways or turned to talk with another occupant or to look out a rear window (5) Sitting on a console (6) Lying back in a reclined seat position (7) Bracing with feet or hands on a surface in front of seat (8) Other abnormal posture (specify): (9) Unknown
·	

	EJECTION/EI	NTRAPMENT
12. Ejection (0) No ejection (1) Complete ejection (2) Partial ejection (3) Ejection, unknown degr (9) Unknown	ree	15. Medium Status (Immediately Prior To Impact) (O) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown
13. Ejection Area (0) No ejection (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear (7) Roof (8) Other area (e.g., back (specify):		16. Entrapment (O) Not entrapped/exit not inhibited (1) Entrapped/pinned - mechanically restrained (2) Could not exit vehicle due to jammed doors, fire, etc. (specify): (9) Unknown  17. Occupant Mobility (0) Occupant fatal before removed from vehicle (1) Removed from vehicle while unconscious or disoriented
14. Ejection Medium (0) No ejection (1) Door/hatch/tailgate (2) Nonfixed roof structure (3) Fixed glazing (4) Nonfixed glazing (specify)  (5) Integral structure (8) Other medium (specify) (9) Unknown	ify):	(2) Removed from vehicle due to injuries (3) Exited vehicle with some assistance (4) Exited vehicle under own power (5) Occupant fully ejected (9) Unknown

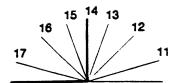
Adjustment 2 ment for shoulder belt Anchorage
djustable upper
nown or rendered m Use destroyed or
manually ack inoperative) //n m Type
Inot used riy riy with riy orn under arm orn behind back id more than elt worn r belt or ed improperly cify):
matic belt system  e Modes  /not in use ) vebbing not included) e d d (specify): ecify):
n o no na // n iv /riri yook e rec ii e //) yedd e

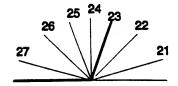
POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
28. Police Reported Belt Use  (0) None used (1) Police did not indicate belt use (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt used, type not specified (6) Child safety seat (7) Automatic belt (8) Other type belt, (specify):  (9) Police indicated "unknown"  29. Police Reported Air Bag Availability/Function (0) No air bag available (1) Police did not indicate air bag availability/function (2) Deployed (3) Not deployed (4) Unknown if deployed (9) Police indicated "unknown"	30. Frontal Air Bag System Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag  Non-functional (2) Air bag disconnected (specify):  (3) Air bag not reinstalled (9) Unknown  31. Frontal Air Bag System Deployment (This Occupant Position) (0) Not equipped/not available (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed
Check the Primary Source Used In Determining Belt Use.  [ ] Not equipped/not available/destroyed or rendered inoperative [ ] Vehicle inspection [ ] Official injury data [ ] Driver/occupant interview [ ] Other (specify): [ ] Unknown if belt used	(9) Unknown  32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag  Non-functional (2) Air bag disconnected (specify):  (3) Air bag not reinstalled (9) Unknown  Specify type of "other" air bag present:
	33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown  34. Are There Indications of Air Bag System Failure? (This Occupant Position) (0) Not equipped/not available (1) No (2) Yes (specify):

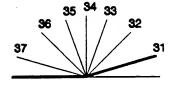
FIRST SEAT FRONTAL AIR	BAG SYSTEM EVALUATION
35. Had Vehicle Been in Previous Accident(s)?  (0) Not equipped/not available (1) No previous accidents   Yes (2) Previous accident(s) without deployment(s) (3) One previous accident with deployment (4) More than one previous accident with at least one deployment (8) Previous accidents, unknown deployment status (9) Unknown	40. Longitudinal Component of Delta V For Air Bag Deployment Impact (_000) Not equipped/not available Code the value of the delta V for the impact that initiated the air bag deployment (_996) Deployment, unknown longitudinal Delta V (_997) Not deployed (_998) Unknown if deployed (_999) Unknown
36. Type of Air Bag (0) Not equipped/not available (1) Original manufacturer installed system (2) Retrofitted air bag (3) Replacement air bag (8) Unknown type of air bag (9) Unknown	41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? (0) Not equipped/not available (1) No (2) Yes (3) Deployed, unknown if flap(s) opened at designated tear points (7) Not deployed (8) Unknown if deployed
37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? (0) Not equipped/not available (1) No prior maintenance (2) Yes, prior maintenance (specify): (9) Unknown  38. Air Bag Deployment Accident Event Sequence Number (00) Not applied to the specify of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence	(9) Unknown  42. Were Air Bag Module Cover Flap(s) Damaged?  (0) Not equipped/not available  (1) No  (2) Yes (specify):  (3) Deployed, unknown if air bag module cover flap(s) damaged  (7) Not deployed  (8) Unknown if deployed  (9) Unknown
(00) Not equipped/not available  Code the accident event sequence number that initiated the air bag deployment  (96) Deployed, unknown event  (97) Not deployed  (98) Unknown if deployed  (99) Unknown	43. Was There Damage To The Air Bag? (00) Not equipped/not available (01) Not damaged  Yes - Air Bag Damage (02) Ruptured (03) Cut (04) Torn
39. CDC For Air Bag Deployment Impact (0) Not equipped/not available (1) Highest delta V (2) Second highest delta V (3) Other non-coded delta V (specify):  (6) Deployed, unknown event (7) Not deployed (8) Unknown if deployed (9) Unknown	(05) Holed (06) Burned (07) Abraded (88) Other damage (specify):  (95) Damaged, details unknown (96) Deployed, unknown if damaged (97) Not deployed (98) Unknown if deployed (99) Unknown

	FIRST SEAT FRONTAL AIR BAG SYSTEM	HEAD RESTRAINT AND SEAT EVALUATION
	EVALUATION continued	49. Head Restraint Type/Damage by Occupant 3
4.4	Source of Air Bag Damage	at This Occupant Position
44.	(00) Not equipped/not available	(0) No head restraints
	(O1) Not damaged	
	(01) Not damaged (02) Object worn by occupant, (specify):	
	(UZ) Object wolli by occupant, (specify).	(2) Integral—damaged during accident (3) Adjustable—no damage
	(03) Object carried by occupant, (specify):	(4) Adjustable—no damage (4) Adjustable—damaged during accident
	tool onless carried by occupants (about 1).	(5) Add-on—no damage
	(04) Adaptive/assistive controls, (specify):	(6) Add-on—damaged during accident
	Inal Unahitaciassistiae controls' (sheorià).	(8) Other (specify):
	(05) Fire in vehicle	(a) Other tabounds.
	(05) Fire in venicle (06) Thermal burns	(9) Unknown
	(07) Rescue or emergency efforts	(U) UIRIUTTII
	(88) Other damage source (specify):	50. Seat Type (this Occupant Position)
	BRACKET SCREWS	(00) Occupant not seated or no seat
	(95) Damaged, unknown source	(01) Bucket
	(96) Deployed, unknown if damaged	(02) Bucket with folding back
	(97) Not deployed	(O3) Bench
	(98) Unknown if deployed	(04) Bench with separate back cushions
	(99) Unknown	(05) Bench with folding back(s)
	(OU) CHANGER	(06) Split bench with separate back cushions
	1	(07) Split bench with folding back(s)
45.	Was The Air Bag Tethered?	(08) Pedestal (i.e., column supported)
	(O) Not equipped/not available	(08) Pedestal (i.e., column supported) (09) Box mounted seat (i.e., van type)
	(1) No	(10) Other seat type (specify):
	(2) Yes (specify number of tether straps):	(10) Other sear type (specify).
İ		(99) Unknown
	(3) Deployed, unknown if tethered	(88) CHKHOWH
	(7) Not deployed	51. Seat Orientation (this Occupant Position)
	(8) Unknown if deployed	(0) Occupant not seated or no seat
	(9) Unknown	(1) Forward facing seat
AF	Did The Air Bag Have Vent Ports?	(1) Forward facing seat (2) Rear facing seat
40.	(0) Not equipped/not available	(2) hear facing seat (inward)
1		(4) Side facing seat (inward)
	(1) No (2) Yes (specify number of vent ports):	(8) Other (specify):
	12) Too tapedity intimocrati vetti portaj.	(o) Caller (apoelity).
1	(3) Deployed, unknown if vent ports present	(9) Unknown
ŀ	(7) Not deployed	(0, 0
1	(8) Unknown if deployed	52. Seat Track Adjusted Position Prior To Impact
1	(9) Unknown	(0) Occupant not seated or no seat
١	1	(1) Non-adjustable seat track
47	Was the Air Bag in this Occupant's Position	
[ ~ ′ ′	Contacted by Another Occupant?	Adjustable Seat Track
	(0) Not equipped/not available	(2) Seat at forward most track position
ĺ	(1) No	(3) Seat between forward most and middle track
l	(2) Yes (specify):	positions
l		(4) Seat at middle track position
Į.	(3) Deployed, unknown if other occupant contact	(5) Seat between middle and rear most track
l	to air bag	positions
1	(7) Not deployed	(6) Seat at rear most track position
l	(8) Unknown if deployed	(9) Unknown
1	(9) Unknown	,
	,.,	"
48	Was This Occupant Wearing Eye-wear?	
70.	(0) Not equipped/not available	1
1	(1) No	
	(2) Eyegiasses sunglasses	· ·
1	(3) Contact lenses	
1	(4) Deployed, unknown if eyewear worn	1
1	(7) Not deployed	1
1	(8) Unknown if deployed	İ
1	(9) Unknown	
1	107 CHANGET	

	HEAD RESTRAINT AND SE	AT EVALUATION continued
53.	Seat Back Incline Prior and Post Impact (00) Occupant not seated or no seat (01) Not adjustable	
	Upright prior to impact (11) Moved to completely rearward position (12) Moved to rearward midrange position (13) Moved to slightly rearward position (14) Retained pre-impact position (15) Moved to slightly forward position (16) Moved to forward midrange position (17) Moved to completely forward position	15 14
	Slightly reclined prior to impact (21) Moved to completely rearward position (22) Moved to rearward midrange position (23) Retained pre-impact position (24) Moved to upright position (25) Moved to slightly forward position (26) Moved to forward midrange position (27) Moved to completely forward position	25 <sup>24</sup> 26 27
	Completely reclined prior to impact (31) Retained pre-impact position (32) Moved to rearward midrange position (33) Moved to slightly rearward position (34) Moved to upright position (35) Moved to slightly forward position (36) Moved to forward midrange position (37) Moved to completely forward position (99) Unknown	35 34 36
54.	Seat Performance (this Occupant Position) (0) Occupant not seated or no seat (1) No seat performance failure(s) (2) Seat adjusters failed (3) Seat back folding locks or "seat back" failed (specify): (4) Seat track/anchors failed (5) Deformed by impact of occupant (6) Deformed by passenger compartment intrusion, (specify):  (7) Combination of above (specify): (8) Other (specify): (9) Unknown	







	C	HILD SAF	ETY	SEA	T				
-	^	6.0							00
55.	(000) No child safety seat	<u>6</u> 0	58.	Child	Safety	Seat h	larness Usa	age	<u></u>
	Applicable codes are found in your NASS Data Collection, Coding and Editing (950) Built-in child safety seat	CDS	59.	Child	Safety	Seat S	Shield Usag	е	00
	(997) Other make/model (specify):	_	60.	Child	Safety	/ Seat 1	Tether Usag	је	<u>00</u>
	(998) Unknown make/model (999) Unknown if child safety seat used			Varial	bies O	ns belo A58-O/		le to	
EE	Tune of Child Safaty Saat	0		(00)	140 0111	ilu saic	ty Jour		
50.	Type of Child Safety Seat (0) No child safety seat			Not E	esiane	ed With	Harness/S	hield/Teth	er
	(1) Infant seat						harness/sh		
	(2) Toddler seat				added	, not us	sed		
	(3) Convertible seat			(02)	After i	market	harness/sh	ield/tether	r used
	(4) Booster seat - with shield			(03)	Child s	safety 8	seat used, i	but no aft	er market
	(5) Booster seat - without shield						d/tether add		
	(7) Other type child safety seat (specify):			(09)		own if h or use	arness/shie d	eld/tether	
	(8) Unknown child safety seat type (9) Unknown if child safety seat used			Desig	ned W	lith Har	ness/Shield	l/Tether	
	(o) Dikilowi i dime delot, cont and						d/tether no		
		4 3					d/tether us		
<b>57</b> .	Child Safety Seat Orientation	00		(19)	Unkno	wn if h	arness/shie	eld/tether	used
	(00) No child safety seat								
							ed With Ha		ield/Tether
	Designed for Rear Facing for This Age/We	eight	1				d/tether no		
	(01) Rear facing		l	•			d/tether us		
	(02) Forward facing		l	(29)	Unkno	own it n	arness/shie	eid/tetner	usea
	(08) Other orientation (specify):		l	/QQ\	Linkno	wn if c	hild safety	C021 11500	•
	(09) Unknown orientation			(33)	O.I.K.I.O	,,,,,,,,,,	ame servery		
	Designed For Forward Facing for This Age	e/Weight							
	(11) Rear facing		İ						
	(12) Forward facing								
	(18) Other orientation (specify):								
	(19) Unknown orientation								
	Unknown Design as Osignatation For This						•		
	Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight								
	(21) Rear facing								
	(22) Forward facing								
	(28) Other orientation (specify):								
	(29) Unknown orientation								
	(99) Unknown if child safety seat used								
			1						

Nonfatal   (3) Hospitalization   (4) Transported and released   (5) Treatment at scene - nontransported   (6) Treatment later   (7) Treatment - other (specify):   (8) Transported to a medical facility-unknown if treated   (9) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unknown   (99) Unk	INJURY CONSEQUENCES  61. Injury Severity (Police Rating)  (0) O - No injury (1) C - Possible injury (2) B - Nonincapacitating injury (3) A - Incapacitating injury (4) K - Killed (5) U - Injury, severity unknown (6) Died prior to accident (9) Unknown  62. Treatment - Mortality (0) No treatment (1) Fatal (2) Fatal - ruled disease (specify):	63. Type Of Medical Facility (for Initial Treatment)  (0) Not treated at a medical facility (1) Trauma center (2) Hospital (3) Medical clinic (4) Physician's office (5) Treatment later at medical facility (8) Other (specify):  (9) Unknown  64. Hospital Stay (00) Not Hospitalized  Code the number of days (up through 60) that the occupant stayed in hospital. (61) 61 days or more
	(3) Hospitalization (4) Transported and released (5) Treatment at scene - nontransported (6) Treatment later (7) Treatment - other (specify):  (8) Transported to a medical facility-unknown if treated	65. Working Days Lost  Code the number of days  (up through 60) that the occupant lost from work due to the accident (00) No working days lost (61) 61 days or more (62) Fatally injured (97) Not working prior to accident

**VARIABLES 66-74** 

TO BE CODED BY THE ZONE CENTER

# TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES	TRAUMA DATA
Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, n days = 30 + n up through 30 days = 60)  (00) Not fatal  (96) Fatal - ruled disease  (99) Unknown	71. Glasgow Coma Scale (GCS) Score (at Medical Facility) (00) Not injured (01) Injured - not treated at medical facility (02) No GCS Score at medical facility (03-15) Code the actual value of the initial GCS Score recorded at medical facility. (97) Injured, details unknown (99) Unknown if injured
67. 1st Medically Reported Cause of Death  68. 2nd Medically Reported Cause of Death  Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death  (00) Not fatal or no additional causes  (96) Mode of death given but specific injuries are not linked to cause of death. (specify):	72. Was the Occupant Given Blood?  (1) No - blood not given (2) Yes - blood given (specify units):  (9) Unknown if blood given  73. Arterial Blood Gases (ABG) - HCO <sub>3</sub> (00) Not injured (01) Injured, ABGs not measured or reported (02-50) Code the actual value of the HCO <sub>3</sub> (96) ABGs reported, HCO <sub>3</sub> unknown (97) Injured, details unknown (99) Unknown if injured
(97) Other result (includes fatal ruled disease) (specify):  (99) Unknown  70. Number of Recorded Injuries for This Occupant Code the actual number of injuries recorded for this occupant.  (00) No recorded injuries (97) Injured, details unknown (99) Unknown if injured	BELT USE DETERMINATION  74. Primary Source of Belt Use Determination (0) Not equipped/not available/destroyed or rendered inoperative (1) Vehicle inspection (2) Official injury data (3) Driver/occupant interview (8) Other (specify): (9) Unknown if belt used

# Appendix K:

NASS CDS OCCUPANT INJURY FORM:

CASE VEHICLE RIGHT FRONT PASSENGER



Administration

U.S. Department of Transportation National Highway Traffic Safety

**OCCUPANT INJURY FORM** 

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

3. Vehicle Number

0 /

2. Case Number - Stratum

9517

4. Occupant Number

02

## **INJURY DATA**

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

		Source of Injury Data		Body Region		Type Anator Structi	nic	A.I.S Specific Anatomic Structure		Level of Injury	A.I.S		Aspec	t	Injury Source	S Con	njury ource fidence .evel	Direct Indirec Injury	t Intrusio
otas e he	ilon st a d	- <sub>5.</sub> <u>7</u>		6. <u> </u>	7	. <u>9</u>	8.	02	9.	<u>02</u>	10/	1	1. 7	12.	001	13.		14. <u> </u>	15. <u>O</u>
	nd is		1	7. 7	18	. <u>9</u>	19.	06	20.	00	21/	22	2. <u>2</u>	23.	001	24.	<u>2</u> ;	25	26. <u>O</u>
31	rd	27	2	3. <u> </u>	29	· —	30.		31.		32	33	3. <u> </u>	34.	*	35.	_ 3	36	37
41	th	38	3	<b>9</b>	40	·	41.		42.		43	44	_*	45.		46	_ 4	17	48
5t	th	49	50	). <u> </u>	51	·	52.		53.		54	55	i	56.	-	57. <sub>-</sub>	5	68. <u> </u>	59
6t	th	60	61	· <u> </u>	62	· <u> </u>	63.		64.		65	66	s	67.	· *	68	6	9. <u> </u>	70
7t	th	71	7:	2	73	· <u> </u>	74.	<del></del> ,	75.		76	77	·	78.	-	79	8	0	81
8t	th	82	83	J	84.	·	85.		86.		87	88	·	89		90	9	1	92
9t	ih	93	94	·	95.	·	96.		97.		98	99	1	00		101	10	2 1	03
10	Oth 1	04	105	;	06.		107.	1	108.	1	09	110	1	11		112	_ 11	3 1	14

				occu	PANT	NJURY	DATA				
	Source of Injury Data	Body Region	Type of Anatomic Structure	A.I.S 90 Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
11th		<del></del>					<del>_</del>			_	
12th	_		_				_			<del></del> .	
13th			<u>.</u>				_	. <del></del>	_	_	
14th										_	
15th							_		_	_	<u>·</u>
16th	<del>-</del> .	_				_	_			_	
17th		_						1		_	
18th		_	_				_		_	_	
19th							_			_	
20th											-
21st			_					<del></del>		_	
22nd						_				_	
23rd		_					_				
24th	_		_	<del>-</del>		_	_				
25th			_	<del></del>		_					

## **OCCUPANT INJURY CLASSIFICATION**

#### **Body Region** Head (2) Face (3) Neck (4)Thorax (5) Abdomen (6)Spine (7)**Upper Extremity Lower Extremity** (8) (9) Unspecified Type of Anatomic Structure

- (1) Whole Area(2) Vessels(3) Nerves
- (4) Organs (includes Muscles/ligaments)
- (5) Skeletal (includes joints)(6) Head LOC

(7) Interviewee

(9) Police

(8) Other source (specify):

(9) Skin

# Specific Anatomic Structure

Vessels, Nerves, Organs.
Bones, Joints are assigned consecutive two digit numbers beginning with 02.

The exceptions to this rule apply to:

Who	le Area
	Skin - Abrasion
(04)	Skin - Contusion
(06)	Skin - Laceration
(80)	Skin - Avulsion
(10)	Amputation
100	

- (20) Burn (30) Crush
- (40) Degloving (50) Injury - NFS
- (90) Trauma, other than mechanical

#### Head - LOC (02) Length of LOC

- (04) Level (06) of
- (08) Consciousness
- (10) Concussion

### **Spine**

- (02) Cervical (04) Thoracic
- (06) Lumbar

### Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

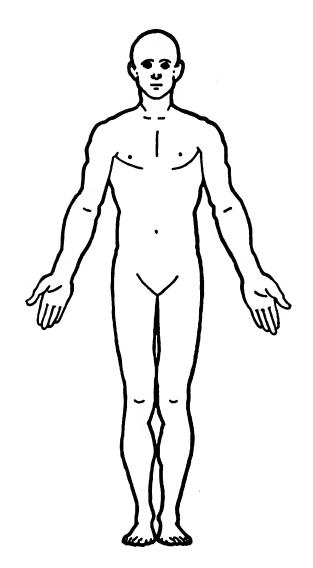
### Abbreviated Injury Scale

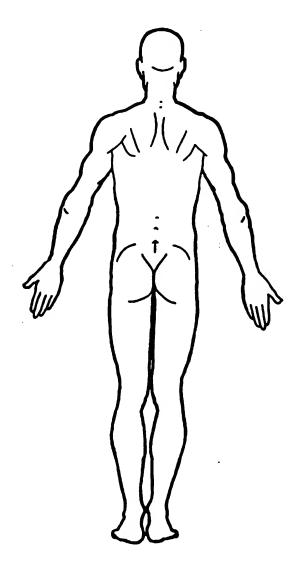
- (1) Minor Injury(2) Moderate Injury
- (3) Serious Injury(4) Severe Injury
- (4) Severe Injury(5) Critical Injury
- (6) Critical Injury
- (untreatable)
  (7) Injured, unknown severity

### Aspect

- (1) Right
- (2) Left
- (3) Bilateral
- (4) Central
- (5) Anterior
- (6) Posterior(7) Superior
- (7) Superio (8) Inferior
- (9) Unknown
- (0) Whole region

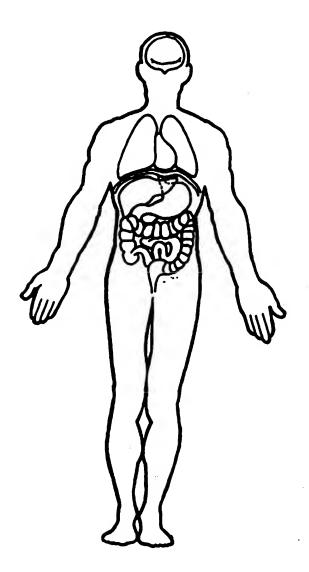
#### **SOURCE OF INJURY DATA INJURY SOURCE** DIRECT/INDIRECT INJURY CONFIDENCE LEVEL OFFICIAL RECORDS (1) Autopsy records with or (1) Certain (1) Direct contact injury without hospital/medical Indirect contact injury (2) Probable (2) records (3) Possible Noncontact injury (2) Hospital/medical records other (9) Unknown Injured, unknown source than emergency room (e.g., discharge summary) (3) Emergency room records only (including associated X-rays or other lab reports) (4) Private physician, walk-in or emergency clinic UNOFFICIAL RECORDS (5) Lay coroner report (6) E.M.S. personnel

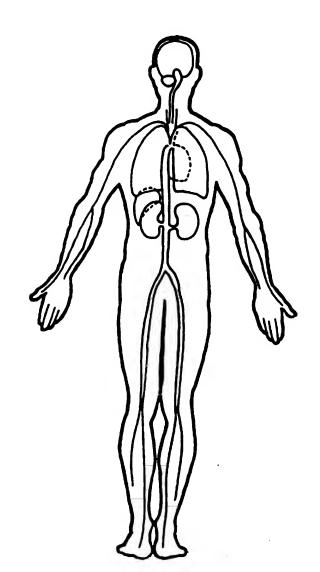




	OFFICIAL INJURY DA	TA — SKELETAL INJURIES
Restrained? No Yes	Indicate the Location, Specific Anatomic Structure, Detail (size,	depth, fracture type, head injury clinical signs and neurological deficits), and or other unofficial sources if medical records and interviewee data are
Blood Alcohol Level (mg/dl) BAL =	bod	
Glasgow Coma Scale Score GCSS =		
Units of Blood Given Units =		
Arterial Blood Gases pH = PO <sub>2</sub> =		
PCO <sub>3</sub>		

			INJURY	sou	RCES		
FRON'	1	(102)	Right side hardware or	(183)	Air bag-passenger side and	(411	) Wall mounted head rest
	' Windshield	(	armrest	(100)	object held	(411	(used behind wheat chair)
	Mirror	(103)	Right A (A1/A2)-pillar	(184)	Air bag-passenger side and	(412	) Other adaptive device
			• • •	(104)		(412	
	Sunvisor		Right B-pillar		object in mouth		(specify):
	Staering wheel rim	(105)	Other right pillar (specify):	(185)	Air bag compartment		
005)	Staering wheel hub/spoke				cover-passenger side		
006)	Staering wheel (combination	(106)	Right side window glass	(186)	Air bag compartment	EXTE	RIOR of OCCUPANT'S
	of codes 004 and 005)	(107)	Right side window frame		cover-passenger side and	VEHI	CLE
007)	Steering column,	(108)	Right side window sill		eyewear	(451)	) Hood
	transmission selector lever,	(109)	Right side window glass	(187)	Air beg compartment	(452)	Outside hardware (e.g.,
	other ettachment	,,,,,,	including one or more of the	,,,,,	covar-passenger side and	(102	outside mirror, antanna)
<b>~</b>	Callular telaphone or CB		_		· · · · · ·	****	
0001	- · ·		following: frame, window	/1001	jewelry	(453)	Other exterior surface or
	radio		sill, A (A1/A2)-pillar, B-piller,	(108)	Air beg compartment		tiras (spacify):
009)	Add on equipment (e.g.,		or roof side rail.		cover-pessenger side and		
	tepe deck, air conditioner)	(110)	Other right side object		object held		
10)	Left instrument panel and		(specify):	(189)	Air bag compartment	(454)	Unknown exterior objects
	below				cover-pessenger side and		
11)	Canter instrument panel and				object in mouth	EXTE	RIOR OF OTHER MOTOR
	below	INTER	IOR	(190)	Other air beg (specify)	VEHIC	CLE
12)	Right instrument panel and	(151)	Seat, back support		• • • • • • • • • • • • • • • • • • • •		Front bumper
-	below		Belt rastraint	(1951	Other air bag compartment	•	Hood adge
1131	Glove compartment door	,,	webbing/buckle	, ,	covar (spacify)		-
	Knee bolster	(152)	_		COVER (Specify)	(503)	Other front of vehicle
		(133)	Belt restraint B-pillar or door				(specify):
	Windshield including one or		frame attachment point				
	mora of the following: front	(154)	Other restraint system	ROOF		(504)	Hood
	header, A (A1/A2)-pillar,		component (specify):	(201)	Front header	(505)	Hood ornament
	instrument panel, mirror, or			(202)	Rear header	(506)	Windshield, roof rail, A-pilla
	staaring assembly (driver	(155)	Head restraint system	(203)	Roof left side rail	(507)	Side surface
	side only)	(160)	Other occupants (specify):	(204)	Roof right side rail		Side mirrors
	Windshield including one or				Roof or convertible top		Other side protrusions
	more of the following: front	(161)	Interior loose objects	(200)	THOSE OF CONVENTIBLE TOP	(303)	•
	_		•	F1 00	_		(specify):
	header, A (A1/A2)-pillar,	(162)	Child safety seat (specify):	FLOOR			
	instrument panel, or mirror			(251)	Floor (including toe pan)	(510)	Rear surface
	(passenger side only)	(163)	Other interior object	(252)	Floor or console mounted	(511)	Undercarriage
17)	Windshiald reinforced by		(specify):		transmission lever, including	(512)	Tiras and wheels
	exterior object (specify)				console	(513)	Other exterior of other
				(253)	Parking brake handle		motor vehicle (specify):
19)	Other front object (specify):	AIR BA	NG		Foot controls including		
		(170)	Air bag-driver side		parking brake		
•			Air bag-driver side and		berking blake	/E 4 4 \	Habana mada a da ata
FT S	n.r.		-	0540		(514)	Unknown extenor of other
	_		eyewaar	REAR			motor vehicle
	Left side interior surface,	(1/2)	Air bag-driver sida and		Backlight (rear window)		
1	excluding hardware or		jewelry	(302)	Backlight storage rack,	OTHE	R VEHICLE OR OBJECT IN
1	ermrasts	(173)	Air bag-driver sida and		door, etc.	THE E	NVIRONMENT
52) I	Left side hardware or		object held	(303)	Other raer object (specify):	(551)	Ground
	irmrest	(174)	Air bag-driver side and	•			Other vehicla or object
53) (	Left A (A1/A2)-pillar		object in mouth				(specify):
	eft B-piller	(175)	Air bag compartment	ADAP	TIVE (ASSISTIVE) DRIVING		
	Other left pillar (specify):	,	cover-driver side	EQUIP		(500)	Hokoum vehicle
٠, ٠	rait pina. tapaon yr.	(176)				(533)	Unknown vehicle or object
: 61	ate aida miadam atasa	(1/0/	Air bag compartment	(401)	Hand controls for		
	aft side window glass		cover-driver side and		braking/acceleration	NONC	ONTACT INJURY
	aft side window frame		eyewear	(402)	Steering control devices	(601)	Fire in vehicle
8) (	eft side window sill	(177)	Air beg compartment		(attached to OEM steering	(602)	Flying glass
59) l	eft side window glass		cover-driver side and jewelry		wheel)		Other noncontect injury
i	ncluding one or more of tha	(178)	Air bag compartment	(403)	Steering knob attached to	-	source
	ollowing: frame, window		cover-drivar side and object		Steering whael		(specify):
	ill, A (A1/A2)-pillar, B-pillar,		held	(405)	Replacament staering wheel	IEO41	· · · ·
	or roof side rail.			(400)			Air bag exhaust gasas
		(1/3)	Air bag compartment		(i.e., reduced diameter)	(697)	Injured, unknown source
	Other left side object		cover-driver side and object		Joy stick staaring controls		
(	specify):		in mouth	(407)	Wheelchair tie-downs		
_		(180)	Air bag-passenger side	(408)	Modification to seat belts,		
	·	(181)	Air bag-passenger side and		(specify):		
SHT S	SIDE		eyewear	(409)	Additional or relocated		
)1) R	light side interior surface,	(182)	Air bag-passenger side and		switches, (specify):		
	xcluding hardware or		lewells				
			, ,		Raised roof		
	rmrests						





	CAUSE OF DEATH							
		ICD·9·CM						
		·						
		OTHER DRUGS (GV16)						
Speci	imen Test Type	Drug(s)	Drug Type					
	ood and urine tests	22.00(0)						
BI	ood test only							
	rine test only Ther test							
	ispecified							
		·						
		Medical Record Abbreviations						
Symbo		Record Type Description						
MOE	Medical examiner's reco	ation based upon an invasive examination of a body rdwhere the information reported on the patient is based on a non-invasive exa	mination of the body					
AR		ary—any medical information on this record should be considered as post-ER sin e records are common in short hospitalizations and usually only contain: admiss						
***	and a listing of surgical t	restments; ICD-9-CM codes are frequently available.  sheetface sheets are essentially the same as admission record/summaries and o						
FS	information as discussed	above						
DS	written from the perspec	rten history of a patient's hospitalization highlighting the patient's major injurie tive of its anthor which in many cases is a consultant						
OS	tients who survive the su	ary of a performed surgical operation often providing detailed information about rgery are normally admitted; thus, this record is normally considered post-ER;	l a specific trauma; pa- however, if this record					
FX	results from an outpaties	at surgery, then treat it as emergency-room related ken after the patient has been admitted, or while in surgery or intensive care	;					
IN EP	Patient progress notes—s	applemental record containing additional nurses notes taken after the patient's a m—medical history and the results of the physical exam obtained by the emergen	dmission					
	signed to the patient upo	n arrival at the emergency room	-					
CN								
er En	Emergency room report—where the author of this information is undefined  Emergency room nurse—"nurse/complaint of" section on the emergency room report							
ED	ED Emergency room doctor"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emer-							
NN								
CV CV	Coroner's verdict-statem	ent of cause of death for legal specific regarding injuries; care must be exercise	d to ascertain the creden-					
CR	<del>-</del>	l information based upon a noninvasive examination performed by a person who	o is not a doctor but who					
ET	has the title of a coroner Emergency medical techn	icianreport by a person who qualifies as an emergency medical services techni-	cian (EMS or EMT)					
0	Other source-medical in	formation based on an other source (e.g., newspaper, DVM-Doctor of Veterina	ry Medicine)					

# Appendix L:

NASS CDS OCCUPANT ASSESSMENT FORM:

CASE VEHICLE RIGHT REAR PASSENGER



U.S. Department of Transportation

# **OCCUPANT ASSESSMENT FORM**

Form Approved O.M.B. No. 2127-0021

National Highway Traffic Safety Administration NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number  2. Case Number - Stratum  3. Vehicle Number  4. Occupant Number  OCCUPANT'S CHARACTERISTICS  10. Occupant's Seat Position  Front Seat  (11) Left side (12) Middle (13) Right side (14) Other (specify): (15) On or in the lap of another occupant	23
2. Case Number - Stratum  7 7 7  Front Seat  (11) Left side (12) Middle  (13) Right side (14) Other (specify):	-
3. Vehicle Number (12) Middle 4. Occupant Number (13) Right side (14) Other (specify):	-
4. Occupant Number O 3 (13) Right side (14) Other (specify):	-
(14) Other (specity):	-
OCCUPANT'S CHARACTERISTICS (15) On or in the lap of another occupant	
5. Occupant's Age Code actual age at time of accident. (00) Less than one year old (specify by month):  (97) 97 years and older (99) Unknown  Second Seat (21) Left side (22) Middle (23) Right side (24) Other (specify): (25) On or in the lap of another occupant	<del>-</del> :
6. Occupant's Sex (1) Male (2) Female-not reported pregnant (3) Female-pregnant-1st trimester(1st-3rd month) (4) Female-pregnant-2nd trimester(4th-6th month) (5) Female-pregnant-3rd trimester(7th-9th month) (6) Female-pregnant-term unknown (9) Unknown  Third Seat (31) Left side (32) Middle (33) Right side (34) Other (specify): (45) Middle (42) Middle (43) Right side (44) Other (specify):	-
7. Occupant's Height Code actual height to the nearest centimeter. (999) Unknown  62 inches X 2.54 = 157 centimeters  (45) On or in the lap of another occupant  (97) In or on unenclosed area (98) Other seat (specify): (99) Unknown	7
8. Occupant's Weight Code actual weight to the nearest kilogram. (999)Unknown  130 pounds X .4536 = 58 kilograms  11. Occupant's Posture (0) Normal posture (1) Kneeling or standing on seat (2) Lying on or across seat (3) Kneeling, standing or sitting in front of (4) Sitting sideways or turned to talk with	another
9. Occupant's Role (1) Driver (2) Passenger (9) Unknown  (5) Sitting on a console Lying back in a reclined seat position (7) Bracing with feet or hands on a surface of seat (8) Other abnormal posture (specify):  (9) Unknown	

	EJE	CTION/EN	NTRAPMENT
(2) Partia	llete ejection I ejection on, unknown degree	0	15. Medium Status (Immediately Prior To Impact) (O) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown
13. Ejection A (0) No eje (1) Winds (2) Left fi (3) Right (4) Left r (5) Right (6) Rear (7) Roof (8) Other (speci	ection shield ront front ear rear area (e.g., back of pickup, etc.)	0	16. Entrapment (0) Not entrapped/exit not inhibited (1) Entrapped/pinned - mechanically restrained (2) Could not exit vehicle due to jammed doors, fire, etc. (specify):  (9) Unknown  17. Occupant Mobility (0) Occupant fatal before removed from vehicle (1) Removed from vehicle while unconscious or disoriented
(2) Nonfi (3) Fixed (4) Nonfi (5) Integr	ection /hatch/tailgate xed roof structure glazing xed glazing (specify): ral structure r medium (specify):	<u></u>	<ul> <li>(2) Removed from vehicle due to injuries</li> <li>(3) Exited vehicle with some assistance</li> <li>(4) Exited vehicle under own power</li> <li>(5) Occupant fully ejected</li> <li>(9) Unknown</li> </ul>

BELT SYSTEM FUNCTION				
18. Manual (Active) Belt System Availability (0) None available (1) Belt removed/destroyed (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt available—type unknown  Integral Belt Partially Destroyed (6) Shoulder belt (lap belt destroyed/removed) (7) Lap belt (shoulder belt destroyed/removed) (8) Other belt (specify): (9) Unknown	22. Shoulder Belt Upper Anchorage Adjustment (0) No shoulder belt (1) No upper anchorage adjustment for shoulder belt  Adjustable shoulder Belt Upper Anchorage (2) In full up position (3) In mid position (4) In full down position (5) Position unknown (9) Unknown if position has adjustable upper anchorage adjustment  23. Automatic (Passive) Belt System Availability/ Function (0) Not equipped/not available (1) 2 point automatic belts			
(00) None used, not available, or belt removed/destroyed (01) Inoperative (specify):  (02) Shoulder belt (03) Lap belt (04) Lap and shoulder belt (05) Belt used—type unknown (08) Other belt used (specify):  (12) Shoulder belt used with child safety seat (13) Lap belt used with child safety seat (14) Lap and shoulder belt used with child safety seat (15) Belt used with child safety seat—type unknown (18) Other belt used with child safety seat (specify): (99) Unknown if belt used	(2) 3 point automatic belts (3) Automatic belts - type unknown  Non-functional (4) Automatic belts destroyed or rendered inoperative (9) Unknown  24. Automatic (Passive) Belt System Use (0) Not equipped/not available/destroyed or rendered inoperative (1) Automatic belt in use (2) Automatic belt in use (manually disconnected, motorized track inoperative) (specify): (3) Automatic belt use unknown (9) Unknown  25. Automatic (Passive) Belt System Type (0) Not equipped/not available (1) Non-motorized system			
20. Proper Use of Manual (Active) Belts (0) None used or not available (1) Belt used properly (2) Belt used properly with child safety seat  **Belt Used Improperly** (3) Shoulder belt worn under arm (4) Shoulder belt worn behind back or seat (5) Belt worn around more than one person (6) Lap belt worn on abdomen (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify):  (8) Other improper use of manual belt system (specify):  (9) Unknown	(2) Motorized system (9) Unknown  26. Proper Use of Automatic (Passive) Belt System (0) Not equipped/not available/not used (1) Automatic belt used properly (2) Automatic belt used properly with child safety seat  Automatic Belt Used Improperly (3) Automatic shoulder belt worn under arm (4) Automatic shoulder belt worn behind back (5) Automatic belt worn around more than one person (6) Lap portion of automatic belt worn on abdomen (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):			
21. Manual (Active) Belt Failure Modes During Accident (0) No manual belt used or not available (1) No manual belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other manual belt failure (specify):	(8) Other improper use of automatic belt system (specify): (9) Unknown  27. Automatic (Passive) Belt Failure Modes During Accident (0) Not equipped/not available/not in use (1) No automatic belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify):  (6) Broken retractor (7) Combination of above (specify): (8) Other automatic belt failure (specify):			

POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
28. Police Reported Belt Use  (0) None used (1) Police did not indicate belt use (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt used, type not specified (6) Child safety seat (7) Automatic belt (8) Other type belt, (specify):  (9) Police indicated "unknown"  29. Police Reported Air Bag Availability/Function (0) No air bag available (1) Police did not indicate air bag availability/function (2) Deployed (3) Not deployed (4) Unknown if deployed (9) Police indicated "unknown"	30. Frontal Air Bag System Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag  Non-functional (2) Air bag disconnected (specify):  (3) Air bag not reinstalled (9) Unknown  31. Frontal Air Bag System Deployment (This Occupant Position) (0) Not equipped/not available (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown
Check the Primary Source Used In Determining Belt Use.  [ ] Not equipped/not available/destroyed or rendered inoperative [ ] Vehicle inspection [ ] Official injury data [ X Driver/occupant interview	32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag  Non-functional (2) Air bag disconnected (specify):  (3) Air bag not reinstalled (9) Unknown Specify type of "other" air bag present:  33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) (0) Not equipped with an "other" air bag
	(1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown  34. Are There Indications of Air Bag System Failure? (This Occupant Position) (0) Not equipped/not available (1) No (2) Yes (specify):

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION				
35. Had Vehicle Been in Previous Accident(s)? (0) Not equipped/not available (1) No previous accidents  Yes (2) Previous accident(s) without deployment(s) (3) One previous accident with deployment (4) More than one previous accident with at least one deployment (8) Previous accidents, unknown deployment status (9) Unknown	40. Longitudinal Component of + Delta V For Air Bag - OOO O Deployment Impact ( 000) Not equipped/not available Code the value of the delta V for the impact that initiated the air bag deployment ( 996) Deployment, unknown longitudinal Delta V ( 997) Not deployed ( 998) Unknown if deployed ( 999) Unknown			
36. Type of Air Bag (0) Not equipped/not available (1) Original manufacturer installed system (2) Retrofitted air bag (3) Replacement air bag (8) Unknown type of air bag (9) Unknown	41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? (0) Not equipped/not available (1) No (2) Yes (3) Deployed, unknown if flap(s) opened at designated tear points (7) Not deployed (8) Unknown if deployed			
37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System?  (0) Not equipped/not available  (1) No prior maintenance  (2) Yes, prior maintenance (specify):  (9) Unknown  38. Air Bag Deployment Accident Event Sequence Number  (00) Not equipped/not available	(9) Unknown  42. Were Air Bag Module Cover Flap(s) Damaged?  (0) Not equipped/not available (1) No (2) Yes (specify):  (3) Deployed, unknown if air bag module cover flap(s) damaged (7) Not deployed (8) Unknown if deployed (9) Unknown			
Code the accident event sequence number that initiated the air bag deployment  (96) Deployed, unknown event (97) Not deployed (98) Unknown if deployed (99) Unknown  39. CDC For Air Bag Deployment Impact (0) Not equipped/not available (1) Highest delta V (2) Second highest delta V (3) Other non-coded delta V (specify):	43. Was There Damage To The Air Bag? (00) Not equipped/not available (01) Not damaged   Yes - Air Bag Damage (02) Ruptured (03) Cut (04) Torn (05) Holed (06) Burned (07) Abraded (88) Other damage (specify):			
(6) Deployed, unknown event (7) Not deployed (8) Unknown if deployed (9) Unknown	<ul> <li>(95) Damaged, details unknown</li> <li>(96) Deployed, unknown if damaged</li> <li>(97) Not deployed</li> <li>(98) Unknown if deployed</li> <li>(99) Unknown</li> </ul>			

	FIRST SEAT FRONTAL AIR BAG SYSTEM	HE	EAD RESTRAINT AND SEAT EVALUATION
	EVALUATION continued		Head Restraint Type/Damage by Occupant 3
AA	Source of Air Bag Damage	49.	at This Occupant Position
44.	(00) Not equipped/not available		(0) No head restraints
	(O1) Not damaged		(1) Integral—no damage
	(02) Object worn by occupant, (specify):		(2) Integral—damaged during accident
	(02) Object Wolling y Goodpalls, 1949 7.		(3) Adjustable—no damage
	(03) Object carried by occupant, (specify):		(4) Adjustable—damaged during accident
	(00) 00)001 00	1	(5) Add-on—no damage
	(04) Adaptive/assistive controls, (specify):	1	(6) Add-on-damaged during accident
	(O) / / (CO)	l	(8) Other (specify):
	(05) Fire in vehicle		
	(06) Thermal burns		(9) Unknown
	(07) Rescue or emergency efforts	i	x 2
	(88) Other damage source (specify):	50.	. Seat Type (this Occupant Position) $\underline{\mathcal{S}}$
			(00) Occupant not seated or no seat
	(95) Damaged, unknown source	1	(01) Bucket
	(96) Deployed, unknown if damaged	1	(O2) Bucket with folding back
	(97) Not deployed		(03) Bench
	(98) Unknown if deployed		(04) Bench with separate back cushions
	(99) Unknown		(05) Bench with folding back(s)
		1	(06) Split bench with separate back cushions
45	Was The Air Bag Tethered?	1	(07) Split bench with folding back(s)
75.	(0) Not equipped/not available	1	(08) Pedestal (i.e., column supported)
	(1) No	1	(09) Box mounted seat (i.e., van type)
	(2) Yes (specify number of tether straps):	1	(10) Other seat type (specify):
·	(2) 103 (0000) 112.1120. 0. 000.00		
	(3) Deployed, unknown if tethered	1	(99) Unknown
l	(7) Not deployed	l	Contraction (abia Convert Projects)
l	(8) Unknown if deployed	51.	. Seat Orientation (this Occupant Position)
l	(9) Unknown		(0) Occupant not seated or no seat
			(1) Forward facing seat
46.	Did Tile All Dog Have Volle . Orto:	1	(2) Rear facing seat (3) Side facing seat (inward)
	(0) Not equipped/not available	1	(4) Side facing seat (inward)
	(1) No (2) Yes (specify number of vent ports):	1	(8) Other (specify):
	(2) Yes (specify fluitiber of Vent ports).		(6) Other (specify).
l	(3) Deployed, unknown if vent ports present	1	(9) Unknown
1	(7) Not deployed		1
	(8) Unknown if deployed	52	. Seat Track Adjusted Position Prior To Impact
•	(9) Unknown		(0) Occupant not seated or no seat
1		1	(1) Non-adjustable seat track
47.	Was the Air Bag in this Occupant's Position		
	Contacted by Another Occupant?		Adjustable Seat Track
	(0) Not equipped/not available		(2) Seat at forward most track position
	(1) No		(3) Seat between forward most and middle track
	(2) Yes (specify):	1	positions
1		1	(4) Seat at middle track position
1	(3) Deployed, unknown if other occupant contact		(5) Seat between middle and rear most track
1	to air bag	1	positions
1	(7) Not deployed	1	(6) Seat at rear most track position
1	(8) Unknown if deployed	1	(9) Unknown
	(9) Unknown	1	
1	W. The One was Marries Sur was	1	
48.	Was This Occupant Wearing Eye-wear?		
1	(0) Not equipped/not available		
	(1) No	1	
1	(2) Eyeglasses/sunglasses		
	(3) Contact lenses	1	
1	(4) Deployed, unknown if eyewear worn	1	
	(7) Not deployed	1	
	(8) Unknown if deployed	1	
1	(9) Unknown	- 1	

	HEAD RESTRAINT AND SEA	AT EVALUATION continued
53.	Seat Back Incline Prior and Post Impact (00) Occupant not seated or no seat (01) Not adjustable	
	Upright prior to impact (11) Moved to completely rearward position (12) Moved to rearward midrange position (13) Moved to slightly rearward position (14) Retained pre-impact position (15) Moved to slightly forward position (16) Moved to forward midrange position (17) Moved to completely forward position	16 15 14 13 12 11
	Slightly reclined prior to impact (21) Moved to completely rearward position (22) Moved to rearward midrange position (23) Retained pre-impact position (24) Moved to upright position (25) Moved to slightly forward position (26) Moved to forward midrange position (27) Moved to completely forward position	25 <sup>24</sup> 23 22 21
	Completely reclined prior to impact (31) Retained pre-impact position (32) Moved to rearward midrange position (33) Moved to slightly rearward position (34) Moved to upright position (35) Moved to slightly forward position (36) Moved to forward midrange position (37) Moved to completely forward position	35 34 33 36 32 31
	(99) Unknown	
54.	Seat Performance (this Occupant Position)  (0) Occupant not seated or no seat  (1) No seat performance failure(s)  (2) Seat adjusters failed  (3) Seat back folding locks or "seat back" failed  (specify):  (4) Seat track/anchors failed  (5) Deformed by impact of occupant  (6) Deformed by passenger compartment intrusion, (specify):  (7) Combination of above (specify):	
	(8) Other (specify): (9) Unknown	

	C	HILD SAF	FETY	SEA	Т	
	Still Co. Co. St. Malla (Mandal	00	58 (	Child	Safety Seat Harness Usage	00
55.	Child Safety Seat Make/Model (000) No child safety seat	00	30.	Ciliid .	Salety Seat Flamess Usage	
	Applicable codes are found in your NASS	CDS				^ A
	Data Collection, Coding and Editing		59. 0	Child :	Safety Seat Shield Usage	00
	(950) Built-in child safety seat					
	(997) Other make/model (specify):		60. 0	Child :	Safety Seat Tether Usage	00
	(998) Unknown make/model	•			·	
	(999) Unknown if child safety seat used				Options below applicable to bles OA58-OA60.	
		λ	1		No child safety seat	
56.	Type of Child Safety Seat	0	1		•	
	(0) No child safety seat				esigned With Harness/Shield/I	
	(1) Infant seat		(		After market harness/shield/te added, not used	ther
	(2) Toddler seat (3) Convertible seat		1 (		After market harness/shield/te	ther used
	(4) Booster seat - with shield				Child safety seat used, but no	
	(5) Booster seat - without shield				harness/shield/tether added	
	(7) Other type child safety seat (specify):		(		Unknown if harness/shield/tetl	her
	(8) Unknown child safety seat type			•	added or used	
	(9) Unknown if child safety seat used		1	Desigi	ned With Harness/Shield/Tethe	er
					Harness/shield/tether not used	•
	ONITE OF A CONTRACTOR	00			Harness/shield/tether used Unknown if harness/shield/tetl	har wood
5/.	Child Safety Seat Orientation (00) No child safety seat		'	(19)	Unknown ii namess/silieid/teti	ilei usea
	(00) No clima salicity addit		(	Unkno	own If Designed With Harness.	/Shield/Tether
	Designed for Rear Facing for This Age/We	eight		. – .	Harness/shield/tether not used	I
	(01) Rear facing		,		Harness/shield/tether used Unknown if harness/shield/tetl	har waad
	(02) Forward facing (08) Other orientation (specify):		'	(29)	Unknown if namess/shield/teti	ner usea
	(00) Other orionation (aposity).		(	(99)	Unknown if child safety seat ι	used
	(09) Unknown orientation					
	Designed For Forward Facing for This Age	e/Weight				
	(11) Rear facing					
	(12) Forward facing (18) Other orientation (specify):	•				
	(16) Other orientation (specify).					
	(19) Unknown orientation					
	Unknown Design or Orientation For This				•	
	Age/Weight, or Unknown Age/Weight					
	(21) Rear facing					
	(22) Forward facing (28) Other orientation (specify):					
	(28) Other orientation (specify).					
	(29) Unknown orientation					
	(99) Unknown if child safety seat used					
					•	
	·					

National Accident Sampling System-Crashworthiness Da INJURY CONSEQUENCES	
61. Injury Severity (Police Rating)  (0) O - No injury (1) C - Possible injury (2) B - Nonincapacitating injury (3) A - Incapacitating injury (4) K - Killed (5) U - Injury, severity unknown (6) Died prior to accident (9) Unknown	63. Type Of Medical Facility (for Initial Treatment)  (0) Not treated at a medical facility (1) Trauma center (2) Hospital (3) Medical clinic (4) Physician's office (5) Treatment later at medical facility (8) Other (specify):
62. Treatment - Mortality (0) No treatment (1) Fatal (2) Fatal - ruled disease (specify):  Nonfatal (3) Hospitalization (4) Transported and released (5) Treatment at scene - nontransported (6) Treatment later (7) Treatment - other (specify):  (8) Transported to a medical facility-unknown if treated (9) Unknown	64. Hospital Stay (00) Not Hospitalized Code the number of days (up through 60) that the occupant stayed in hospital. (61) 61 days or more (99) Unknown  65. Working Days Lost Code the number of days (up through 60) that the occupant lost from work due to the accident (00) No working days lost (61) 61 days or more (62) Fatally injured (97) Not working prior to accident (99) Unknown
STOP W	ORK HERE
VARIAB	LES 66-74
TO BE CODED BY	THE ZONE CENTER

## TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES	TRAUMA DATA
Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, n days = 30 +n up through 30 days = 60)  (00) Not fatal  (96) Fatal - ruled disease  (99) Unknown	71. Glasgow Coma Scale (GCS) Score (at Medical Facility) (00) Not injured (01) Injured - not treated at medical facility (02) No GCS Score at medical facility (03-15) Code the actual value of the initial GCS Score recorded at medical facility. (97) Injured, details unknown (99) Unknown if injured
67. 1st Medically Reported Cause of Death  68. 2nd Medically Reported Cause of Death  69. 3rd Medically Reported Cause of Death  Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death  (00) Not fatal or no additional causes  (96) Mode of death given but specific injuries are not linked to cause of death. (specify):	72. Was the Occupant Given Blood?  (1) No - blood not given  (2) Yes - blood given  (specify units):  (9) Unknown if blood given  73. Arterial Blood Gases (ABG) - HCO <sub>3</sub> (00) Not injured  (01) Injured, ABGs not measured or reported  (02-50) Code the actual value of the HCO <sub>3</sub> (96) ABGs reported, HCO <sub>3</sub> unknown  (97) Injured, details unknown  (99) Unknown if injured
(97) Other result (includes fatal ruled disease) (specify):  (99) Unknown  70. Number of Recorded Injuries for This Occupant  Code the actual number of injuries recorded for this occupant.  (00) No recorded injuries  (97) Injured, details unknown  (99) Unknown if injured	74. Primary Source of Belt Use Determination (0) Not equipped/not available/destroyed or rendered inoperative (1) Vehicle inspection (2) Official injury data (3) Driver/occupant interview (8) Other (specify): (9) Unknown if belt used

## Appendix M:

NASS CDS OCCUPANT INJURY FORM:

CASE VEHICLE RIGHT REAR PASSENGER



U.S. Department of Transportation National Highway Traffic Safety Administration

OCCUPANT INJURY FORM

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1.	Primary	Sampling	Unit	Number

 $\frac{10}{10}$ 

3. Vehicle Number

0/

2. Case Number - Stratum

9517

4. Occupant Number

03

#### **INJURY DATA**

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

			<del></del>	A.I.S 9	90				Injury		Occupant
	Source of Injury Data	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Source Confidence Level	Direct/ Indirect Injury	Area Intrusion Number
Y, P	5. <u>7</u>	6. 8	7. <b>9</b>	a. <u>0</u> 0	9. <u>9</u> 9	10/	11. / 12.	101	13	4/	<sub>15.</sub> <u>0</u> 0
2nd	16	17 1	18 19	·	20	21	22 23.		24 2	5 2	26
3rd	27	28 2	29 30	·	31	32	33 34.		35 3	63	37
4th	38	39 4	lo 41	·	42	43	44 45.	*	46 4	7 4	18
5th	49	50 5	51 52	·	53	54	55 56.		57 5	8 5	59
6th	60	616	62 63	· <u>— —</u>	64	65	66 67.		68 6	9 7	<b>7</b> 0
7th	71	72 7	73 74	· <del></del>	75	76	77 78.		79 8	D 8	n
8th	82	83 8	4 85	·	86	87	88 89.		90 9	1 9	2
9th	93	94 9	5 96		97	98	99 100.	1	01 10;	2 10	з
10th	104 1	05 10	6 107	1	08	109 1	10 111.	1	12 11:	3 11	4

	OCCUPANT INJURY DATA										
	Source of Injury Data	Body Region	Type of Anatomic Structure	A.I.S 90 Specific Anatomic Structure		A.I.S. Severity		Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
11th	_			<del></del>			1 (# C )			_	
12th			*	<del></del>			_			<del></del> .	
13th	_		<del></del>								
14th	_	_	<del></del>		<del></del>					_	
15th		******	_	<del></del>					<del></del>	_	*
16th			_						_	_	
17th		_	_	<del></del>				<u> </u>	_	_	
18th		<del></del>		<del></del>	<del></del>					_	
19th										_	
20th											,
21st		******	_		<del></del>				· 		*
22nd	_	_							_	_	
23rd		_							<u>.</u>	_	
24th			_			_	_		_		
25th				<del></del>						_	

#### OCCUPANT INJURY CLASSIFICATION

#### **Body Region** Head Face (2)(3)Neck (4)Thorax (5) Abdomen (6)Spine (7)**Upper Extremity** (8) Lower Extremity (9) Unspecified Type of Anatomic Structure

- Whole Area (1) (2)Vessels
- (3) Nerves
- (4)Organs (includes Muscles/ligaments)
- (5) Skeletal (includes joints)
- (6)Head - LOC
- (9) Skin

#### Specific Anatomic Structure

Vessels, Nerves, Organs. Bones, Joints are assigned consecutive two digit numbers beginning with 02.

The exceptions to this rule apply to:

#### Whole Area (02) Skin - Abrasion (04) Skin - Contusion (06) Skin - Laceration (08) Skin - Avulsion (10) Amputation

- (20) Burn (30) Crush
- (40) Degloving (50) Injury - NFS
- (90) Trauma, other than mechanical

#### Head - LOC (02) Length of LOC

- (04) Level (06) of
- (08) Consciousness
- (10) Concussion

#### Spine

- (02) Cervical (04) Thoracic
- (06) Lumbar

#### Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

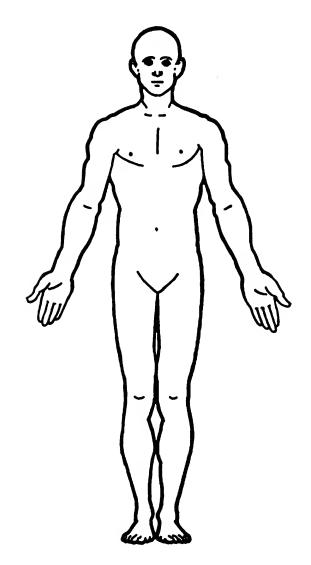
#### **Abbreviated Injury Scale**

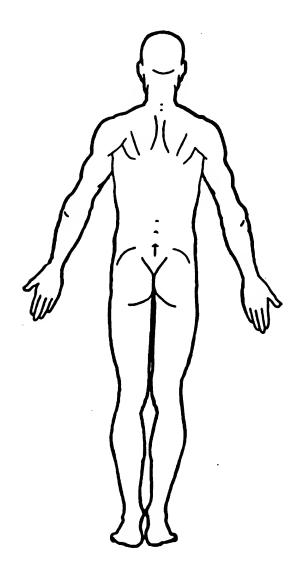
- Minor Injury
- Moderate Injury (2)
- (3)Serious Injury
- (4) Severe Injury
- Critical Injury (5)
- (6)Maximum (untreatable)
- (7)Injured, unknown severity

#### Aspect

- (1)Right
- Left (2)
- (3) Bilateral
- (4)Central
- (5) Anterior
- (6) **Posterior** (7)Superior
- (8) Inferior
- (9)Unknown
- Whole region (O)

#### **SOURCE OF INJURY DATA INJURY SOURCE** DIRECT/INDIRECT INJURY CONFIDENCE LEVEL OFFICIAL RECORDS (1) Autopsy records with or (1) Certain Direct contact injury without hospital/medical (2) Probable (2) Indirect contact injury records (3) Possible Noncontact injury (2) Hospital/medical records other (9) Unknown Injured, unknown source than emergency room (e.g., discharge summary) (3) Emergency room records only (including associated X-rays or other lab reports) (4) Private physician, walk-in or emergency clinic **UNOFFICIAL RECORDS** (5) Lay coroner report (6) E.M.S. personnel (7) Interviewee (8) Other source (specify): (9) Police



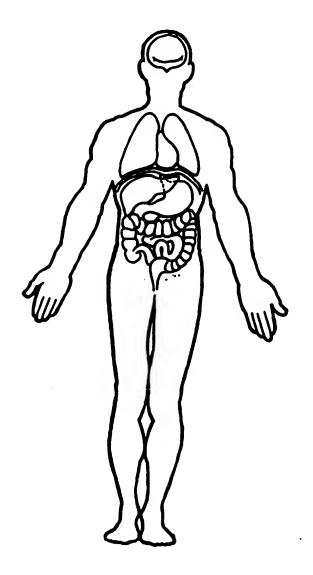


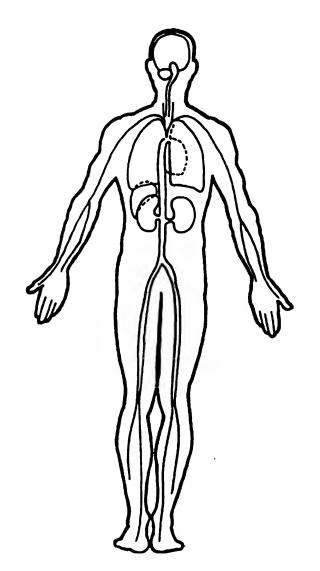
	OFFICIAL INJURY DATA	A - SKELETAL INJURIES
Restrained? No Yes	Indicate the Location, Specific Anatomic Structure, Detail (size, dep Source of all injuries indicated by official sources (or from PAR or o unavailable.)	oth, fracture type, head injury clinical signs and neurological deficits), and ther unofficial sources if medical records and interviewee data are
Blood Alcohol Level (mg/dl) BAL =	o o o	
Glasgow Coma Scale Score GCSS =		
Units of Blood Given Units =		
Arterial Blood Gases pH ==		
PCO <sub>2</sub> = PCO <sub>2</sub> HCO <sub>3</sub>		

			INJURY	sou	RCES		
FRON	JT.	(102)	Right side hardware or	(183	) Air bag-passenger side and	(411	) Wall mounted head rest
1	Windshield	(102)	armrest	(100	object held	(411	(used behind wheel chair)
	Mirror	(103)	Right A (A1/A2)-pillar	(184	) Air bag-passenger side and	(412	) Other adaptive device
(003)	Sunvisor	(104)	Right B-pillar		object in mouth		(specify):
(004)	Steering wheel rim	(105)	Other right pillar (specify):	(185	) Air bag compartment		
(005)	Steering wheel hub/spoke				cover-passenger side		
(006)	Steering wheel (combination	(106)	Right side window glass	(186	Air bag compartment	EXT	RIOR of OCCUPANT'S
	of codes 004 and 005)	(107)	Right side window frame		cover-passenger side and	VEHI	CLE
(007)	Steering column,	(108)	Right side window sill		eyewear	(451)	) Hood
ĺ	transmission selector lever,	(109)	Right side window glass	(187	Air bag compartment	(452)	) Outside hardware (e.g.,
	other attachment		including one or more of the		cover-passenger side and		outside mirror, antennal
(0081	Cellular telephone or CB		following: frame, window		jewelry	(453)	Other exterior surface or
	radio		sill, A (A1/A2)-pillar, B-pillar,	(188)	Air bag compartment		tires (specify):
(009)	Add on equipment (e.g.,	44.40	or roof side rail.		cover-passenger side and		
(010)	tape deck, air conditioner)	(110)	Other right side object	41.00	object held		
(010)	Laft instrument panel and below		(specify):	(189)	Air bag compartment	(454)	Unknown exterior objects
(011)	Center instrument panel and		<del></del>		covar-passenger side and object in mouth	CVTE	DIOP OF OTHER MOTOR
(011)	below	INTER	UOR	(190)	Other air bag (specify)	VEHI	RIOR OF OTHER MOTOR
(012)	Right instrument panel and		Seat, back support	(150)	Culei all Day (specify)	_	Front bumper
,	below		Belt restraint	(195)	Other air bag compartment	•	Hood edge
(0131	Glove compartment door		webbing/buckle	• •	cover (specify)		Other front of vehicle
(014)	Knee bolster	(153)	Belt restraint B-pillar or door			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(specify):
(015)	Windshield including one or		frame attachment point			•	
	more of the following: front	(154)	Other restraint system	ROOF	:	(504)	Hood
	header, A (A1/A2)-pillar,		component (specify):	(201)	Front header	(505)	Hood ornament
	instrument panel, mirror, or			(202)	Rear header	(506)	Windshield, roof rail, A-pillar
	steering assembly (driver	(155)	Head restraint system	(203)	Roof left side rail	(507)	Side surfaca
	side only)	(160)	Other occupants (specify):	(204)	Roof right side rail	(508)	Side mirrors
(016)	Windshield including one or			(205)	Roof or convertible top	(509)	Other side protrusions
	more of the following: front		Interior loose objects				(specify):
	header, A (A1/A2)-pillar,	(162)	Child safety seat (specify):	FLOO			
	instrument panel, or mirror				Floor (including toe pan)		Rear surface
(017)	(passenger side only)	(163)	Other interior object	(252)	Floor or console mounted		Undercarriage
(017)	Windshield reinforced by		(specify):		transmission lever, including		Tiras and wheels
	exterior object (specify)			12521	Console	(513)	Other extenor of other
(019)	Other front object (specify):	AIR BA	A.G.		Parking brake handle Foot controls including		motor vehicle (specify):
,,	o the mont object (specify)		Air bag-driver side	1254)	parking brake		<del></del>
			Air bag-driver side and		parking brake	(514)	Unknown exterior of other
LEFT S	SIDE		eyewear	REAR		(314)	motor vehicle
(051)	Left side interior surface,	(172)	Air bag-driver side and	(301)	Backlight (rear window)		motor volucio
	excluding hardware or		jewelry		Backlight storage rack,	OTHE	R VEHICLE OR OBJECT IN
	armrests	(173)	Air bag-driver side and		door, etc.	THE E	NVIRONMENT
(052)	Left sida hardware or		object held	(303)	Other rear object (specify):		Ground
	armrast	(174)	Air bag-driver side and	•		(598)	Other vehicle or object
(053)	Left A (A1/A2)-pillar		object in mouth				(specify):
	Left B-pillar	(175)	Air bag compartment	ADAP	TIVE (ASSISTIVE) DRIVING	•	
(055)	Other left pillar (specify):		cover-driver side	EQUIP		(599)	Unknown vehicle or object
		(176)	Air bag compartment	(401)	Hand controls for		
	Left sida window glass		cover-driver side and		braking/acceleration	NONC	ONTACT INJURY
	Left side window frame		eyewear	(402)	Steering control devices	(601)	Fira in vehicle
	Left side window sill	(177)	Air bag compartment		(attached to OEM steering		Flying glass
	Left side window glass	(170)	cover-driver side and jewelry	4400	wheel)	(603)	Other noncontact injury
	including one or more of tha	(178)	Air bag compartment	(403)	Steering knob attached to		source
	following: frame, window sill, A (A1/A2)-pillar, B-pillar,		cover-driver side and object	(40E)	Steering wheel		(specify):
	or roof side rail.	(179)	held Air bag compartment	(405)	Replacement steering wheel (i.e., reduced diameter)		Air bag exhaust gases
	Other left side object	( . , . ,	cover-driver side and object	(406)		(09/)	Injured, unknown source
	(specify):		in mouth		Joy stick steering controls Wheelchair tie-downs		
	(0,000)	(180)	Air bag-passenger side		Modification to seat belts,		
			Air bag-passenger side and	, .50/	(specify):		
RIGHT	SIDE	••	eyeweer	(409)	Additional or relocated		
(1011	Right side interior surface,	(182)	Air bag-passenger side and		switches, (specify):		
	excluding hardware or		jeweiry				
	armrests			(410)	Raised roof		

## OFFICIAL INJURY DATA -INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)





		ICD·9·CM	
		**	4 .
		OTHER DRUGS (GV16)	
Specin	nen Test Type	Drug(s)	Drug Type
	od and urine tests		
	od test only ne test only		
	ner test		
Uns	specified		
		Medical Record Abbreviations	
Symbol		Record Type Description	
A		based upon an invasive examination of a body	
MIE AIR		ere the information reported on the patient is based on a non-inv ny medical information on this record should be considered as pos	
7 him.	patient's admission; these recor	rds are common in short hospitalizations and usually only contain	
FS		ents; ICD-9-CM codes are frequently available. face sheets are essentially the same as admission record/summa:	ries and contain the same types of
ne	information as discussed above	istory of a patient's hospitalization highlighting the patient's majo	injuries: this record is often
DS	written from the perspective of	its author which in many cases is a consultant	•
os		a performed surgical operation often providing detailed informati are normally admitted; thus, this record is normally considered p	
	results from an outpatient surg	ery, then treat it as emergency-room related	
PX PN	Radiographic records—taken as Patient progress notes—supples	ter the patient has been admitted, or while in surgery or intensive nental record containing additional nurses notes taken after the pa	e care atient's admission
HP	History and physical exam-me	dical history and the results of the physical exam obtained by the	
CN		ons are in essence additional history and physicial exams perform	
KR		om physician; the consultation may occur during the emergency re the author of this information is undefined	room visit or after admission
EN	Emergency room nurse-"nurse	c/complaint of™ section on the emergency room report	
ED	Emergency room doctor-"obje- gency room report)	ctive/physical exam" section plus "diagnosis and treatment" section	ns (i.e., doctor portion of emer-
NN	Nurse notes-supplemental reco	rd containing additional notes taken by the emergency room nurs	se(s)
EX CV		ring the patients stay in the emergency room cause of death for legal specific regarding injuries; care must be	exercised to ascertain the creden-
	tials of the verdict's author.		
	has the title of a coroner	rmation based upon a noninvasive examination performed by a pe	SLAOD MDO 12 DOT # GOCTOL DAT MHO
		-report by a person who qualifies as an emergency medical service tion based on an other source (e.g., newspaper, DVM–Doctor of V	
U	Other source-memoral information	ion based on an other source (e.g., newspaper, Dvivi-Dotton of	veterinary Medicine,

## Appendix N:

NASS CDS OCCUPANT ASSESSMENT FORM:

VEHICLE #2 DRIVER



Form Approved

OCCUPANT ASSESSMENT FORM O.M.B. No. 2127-0021 U.S. Department of Transportation NATIONAL ACCIDENT SAMPLING SYSTEM National Highway Traffic Safety CRASHWORTHINESS DATA SYSTEM Administration OCCUPANT'S SEATING 1. Primary Sampling Unit Number 10. Occupant's Seat Position 2. Case Number - Stratum Front Seat (11) Left side 3. Vehicle Number (12) Middle (13) Right side 4. Occupant Number (14) Other (specify): OCCUPANT'S CHARACTERISTICS (15) On or in the lap of another occupant Second Seat 5. Occupant's Age (21) Left side Code actual age at time of accident. (22) Middle (00) Less than one year old (specify by month): (23) Right side (24) Other (specify): (97) 97 years and older (25) On or in the lap of another occupant (99) Unknown Third Seat (31) Left side (32) Middle 6. Occupant's Sex (33) Right side (1) Male (34) Other (specify): (2) Female-not reported pregnant (35) On or in the lap of another occupant (3) Female-pregnant-1st trimester(1st-3rd month) (4) Female-pregnant-2nd trimester(4th-6th month) Fourth Seat (5) Female-pregnant-3rd trimester(7th-9th month) (41) Left side (6) Female-pregnant-term unknown (42) Middle (9) Unknown (43) Right side (44) Other (specify): (45) On or in the lap of another occupant 60 7. Occupant's Height (97) In or on unenclosed area Code actual height to the nearest (98) Other seat (specify): centimeter. (99) Unknown (999) Unknown 63 inches x 2.54 = 160 centimeters 11. Occupant's Posture 8. Occupant's Weight (0) Normal posture Code actual weight to the nearest kilogram. Abnormal posture (999)Unknown (1) Kneeling or standing on seat (2) Lying on or across seat 115 pounds X .4536 = 52 kilograms (3) Kneeling, standing or sitting in front of seat (4) Sitting sideways or turned to talk with another occupant or to look out a rear window 9. Occupant's Role (5) Sitting on a console (1) Driver (6) Lying back in a reclined seat position (2) Passenger (7) Bracing with feet or hands on a surface in front (9) Unknown of seat (8) Other abnormal posture (specify): (9) Unknown

	EJECTION/ENTRAPMENT									
12.	Ejection (0) No ejection (1) Complete ejection (2) Partial ejection (3) Ejection, unknown degree (9) Unknown	0	15. Medium Status (Immediately Prior To Impact) (O) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown							
13.	Ejection Area (0) No ejection (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear (7) Roof (8) Other area (e.g., back of pickup, etc (specify): (9) Unknown	<u>O</u> :.)	(0) Not entrapped/exit not inhibited (1) Entrapped/pinned - mechanically restrained (2) Could not exit vehicle due to jammed doors, fire, etc. (specify):  (9) Unknown  17. Occupant Mobility (0) Occupant fatal before removed from vehicle (1) Removed from vehicle while unconscious or disoriented							
14.	Ejection Medium  (0) No ejection  (1) Door/hatch/tailgate  (2) Nonfixed roof structure  (3) Fixed glazing  (4) Nonfixed glazing (specify):  (5) Integral structure  (8) Other medium (specify):  (9) Unknown	0	<ul> <li>(2) Removed from vehicle due to injuries</li> <li>(3) Exited vehicle with some assistance</li> <li>(4) Exited vehicle under own power</li> <li>(5) Occupant fully ejected</li> <li>(9) Unknown</li> </ul>							

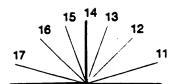
18. Manual (Active) Belt System Availability (0) None available (1) Bet removed/destroyed (2) Shoulder belt (3) Lap bet shoulder belt (4) Lap and shoulder belt (6) Shoulder belt (apper Anchorage adjustment for shoulder belt (7) Lap belt (shoulder belt destroyed/removed) (8) Other belt (specify): (9) Unknown  19. Manual (Active) Belt System Use (00) None used, not available, or belt removed/destroyed (10) Inone used, not not available, or belt removed/destroyed (11) Inoperative (specify): (12) Shoulder belt used with child safety seat (13) Lap belt used with child safety seat (14) Lap and shoulder belt used with child safety seat (15) Belt used with child safety seat (16) Belt used with child safety seat (17) Lap belt used with child safety seat (18) Cher belt used swith child safety seat (19) Unknown (19) Unknown (19) Unknown (19) Unknown (20) Thore belt used (appoint): (21) Shoulder belt used with child safety seat (15) Belt used with child safety seat (16) No no used on not available (17) Reposition (18) Other belt used (appoint): (29) Unknown (20) None used on not available (21) Inone used on not available (22) Proper Use of Manual (Active) Belts (23) Automatic Delt use unknown (24) Automatic Delt use unknown (25) Unknown (26) Chap poperty (27) In Indiu poposition (28) Other bett used with child safety seat (19) None used on not available (10) None used on not available (11) None used on not available (12) Shoulder belt used or not available (13) Automatic Delt used innormatic Delt used innormatic Delt used innormatic Delt used innormatic Delt worn under arm (29) Unknown (29) Unknown (20) Individual Delt used innormatic Delt used innormatic Delt worn under arm (20) None used on not available (21) Automatic Delt used innormatic Delt worn under arm (22) Electroperty (23) Automatic Delt used innormatic Delt worn under arm (24) Automatic Delt used innormatic Delt worn under arm (25) Automatic Delt used innormatic Delt worn under arm (26) Unknown (27) Automatic Delt used innormatic Delt worn under arm (28) Other
(3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other manual belt failure (specify): (7) Combination of above (specify): (8) Other manual belt failure (specify): (8) Broken retractor (9) Not equipped/not available/not in use (1) No automatic belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify):

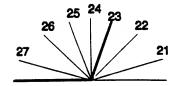
	POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION	
28.	Police Reported Belt Use  (0) None used (1) Police`did not indicate belt use (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt used, type not specified (6) Child safety seat	30. Frontal Air Bag System Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag  Non-functional (2) Air bag disconnected (specify):	2
	<ul> <li>(7) Automatic belt</li> <li>(8) Other type belt, (specify):</li> <li>(9) Police indicated "unknown"</li> </ul>	(3) Air bag not reinstalled (9) Unknown  31. Frontal Air Bag System Deployment (This Occupant Position)	<u>)</u>
29.	Police Reported Air Bag Availability/Function  (0) No air bag available (1) Police did not indicate air bag availability/function (2) Deployed (3) Not deployed (4) Unknown if deployed (9) Police indicated "unknown"	(0) Not equipped/not available (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision ever during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown	ent A
	Check the Primary Source Used In Determining Belt Use.  [ ] Not equipped/not available/destroyed or rendered inoperative [ ] Vehicle inspection [ ] Official injury data [ ] Driver/occupant interview [ ] Other (specify): [ ] Unknown if belt used	32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag  Non-functional (2) Air bag disconnected (specify):  (3) Air bag not reinstalled (9) Unknown Specify type of "other" air bag present:	<u>o</u>
		33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision ev during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown	ent
	· .	34. Are There Indications of Air Bag System Failure? (This Occupant Position) (0) Not equipped/not available (1) No (2) Yes (specify):  (9) Unknown	<u> </u>

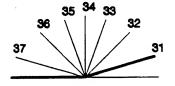
FIRST SEAT FRONTAL AIR	BAG SYSTEM EVALUATION
35. Had Vehicle Been in Previous Accident(s)?  (0) Not equipped/not available (1) No previous accidents  Yes (2) Previous accident(s) without deployment(s) (3) One previous accident with deployment (4) More than one previous accident with at least one deployment (8) Previous accidents, unknown deployment status (9) Unknown	40. Longitudinal Component of  Delta V For Air Bag Deployment Impact (_000) Not equipped/not available  Code the value of the delta V for the impact that initiated the air bag deployment (_996) Deployment, unknown longitudinal Delta V (_997) Not deployed (_998) Unknown if deployed (_999) Unknown
36. Type of Air Bag (0) Not equipped/not available (1) Original manufacturer installed system (2) Retrofitted air bag (3) Replacement air bag (8) Unknown type of air bag (9) Unknown	41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? (0) Not equipped/not available (1) No (2) Yes (3) Deployed, unknown if flap(s) opened at designated tear points (7) Not deployed (8) Unknown if deployed
37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System?  (0) Not equipped/not available  (1) No prior maintenance  (2) Yes, prior maintenance (specify):  (9) Unknown  38. Air Bag Deployment Accident Event Sequence Number  (00) Not equipped/not eveilable	(9) Unknown  42. Were Air Bag Module Cover Flap(s) Damaged?  (0) Not equipped/not available  (1) No  (2) Yes (specify):  (3) Deployed, unknown if air bag module cover flap(s) damaged  (7) Not deployed  (8) Unknown if deployed  (9) Unknown
(00) Not equipped/not available  Code the accident event sequence number that initiated the air bag deployment  (96) Deployed, unknown event  (97) Not deployed  (98) Unknown if deployed  (99) Unknown	43. Was There Damage To The Air Bag? (00) Not equipped/not available (01) Not damaged  Yes - Air Bag Damage (02) Ruptured (03) Cut (04) Torn
39. CDC For Air Bag Deployment Impact (0) Not equipped/not available (1) Highest delta V (2) Second highest delta V (3) Other non-coded delta V (specify):  (6) Deployed, unknown event (7) Not deployed (8) Unknown if deployed (9) Unknown	(05) Holed (06) Burned (07) Abraded (88) Other damage (specify):  (95) Damaged, details unknown (96) Deployed, unknown if damaged (97) Not deployed (98) Unknown if deployed (99) Unknown

	FIRST SEAT FRONTAL AIR BAG SYSTEM	HE	EAD RESTRAINT AND SEAT EVALUATION
	EVALUATION continued		2
	$\wedge \wedge$	49.	Head Restraint Type/Damage by Occupant
44.	Source of All Day Damage		at This Occupant Position
	(00) Not equipped/not available		(0) No head restraints (1) Integral—no damage
	(01) Not damaged (02) Object worn by occupant, (specify):		(1) Integral—no damage (2) Integral—damaged during accident
	(U2) Object World by occupant, (spesity).		(3) Adjustable—no damage
	(03) Object carried by occupant, (specify):		(4) Adjustable—damaged during accident
			(5) Add-on—no damage
	(04) Adaptive/assistive controls, (specify):		(6) Add-on-damaged during accident
			(8) Other (specify):
	(05) Fire in vehicle		
	(06) Thermal burns		(9) Unknown
	(07) Rescue or emergency efforts		
ł	(88) Other damage source (specify):	50.	Seat Type (this Occupant Position)
1	(05)		(00) Occupant not seated or no seat
	(95) Damaged, unknown source		(01) Bucket (02) Bucket with folding back
l	(96) Deployed, unknown if damaged (97) Not deployed		(O2) Bucket with folding back
l	(98) Unknown if deployed		(04) Bench with separate back cushions
	(99) Unknown		(05) Bench with folding back(s)
	(33) Olikilowii	ĺ	(06) Split bench with separate back cushions
			(07) Split bench with folding back(s)
45.	Was The Air Bag Tethered?	1	(08) Pedestal (i.e., column supported)
	(0) Not equipped/not available	ŀ	(09) Box mounted seat (i.e., van type)
1	(1) No		(10) Other seat type (specify):
	(2) Yes (specify number of tether straps):	l	· · · · · · · · · · · · · · · · · · ·
1	(3) Deployed, unknown if tethered	İ	(99) Unknown
	(7) Not deployed	ŀ	
	(8) Unknown if deployed	51.	. Seat Orientation (this Occupant Position)
	(9) Unknown		(0) Occupant not seated or no seat
			(1) Forward facing seat
46.	Did The Air Bag Have Vent Ports?		(2) Rear facing seat
	(0) Not equipped/not available	1	(3) Side facing seat (inward) (4) Side facing seat (outward)
	(1) No (2) Yes (specify number of vent ports):	l	(8) Other (specify):
	(2) Yes (specify flumber of vent ports).	1	(b) Other (specify).
	(3) Deployed, unknown if vent ports present		(9) Unknown
1	(7) Not deployed		2
l	(8) Unknown if deployed	52	. Seat Track Adjusted Position Prior To Impact 🥭
1	(9) Unknown	1	(0) Occupant not seated or no seat
			(1) Non-adjustable seat track
47.	Was the Air Bag in this Occupant's Position	1	A.P. markle Cond Toroli
1	Contacted by Another Occupant?	1	Adjustable Seat Track
	(0) Not equipped/not available	1	(2) Seat at forward most track position (3) Seat between forward most and middle track
	(1) No		positions
	(2) Yes (specify):	1	(4) Seat at middle track position
1	(3) Deployed, unknown if other occupant contact		(5) Seat between middle and rear most track
	to air bag	1	positions
1	(7) Not deployed	1	(6) Seat at rear most track position
	(8) Unknown if deployed	1	(9) Unknown
	(9) Unknown		, = ,
	· ·	1	
48	. Was This Occupant Wearing Eye-wear?	1	
1	(0) Not equipped/not available	1	
	(1) No	1	
	(2) Eyeglasses/sunglasses	1	
	(3) Contact lenses	1	
1	(4) Deployed, unknown if eyewear worn	1	
1	(7) Not deployed	1	
1	(8) Unknown if deployed		
1	(9) Unknown	1	

	HEAD RESTRAINT AND SE	AT EVALUATION continued
53.	Seat Back Incline Prior and Post Impact (00) Occupant not seated or no seat (01) Not adjustable	
	Upright prior to impact (11) Moved to completely rearward position (12) Moved to rearward midrange position (13) Moved to slightly rearward position (14) Retained pre-impact position (15) Moved to slightly forward position (16) Moved to forward midrange position (17) Moved to completely forward position	15 14 16 17
	Slightly reclined prior to impact (21) Moved to completely rearward position (22) Moved to rearward midrange position (23) Retained pre-impact position (24) Moved to upright position (25) Moved to slightly forward position (26) Moved to forward midrange position (27) Moved to completely forward position	25 <sup>24</sup> 26 27
	Completely reclined prior to impact (31) Retained pre-impact position (32) Moved to rearward midrange position (33) Moved to slightly rearward position (34) Moved to upright position (35) Moved to slightly forward position (36) Moved to forward midrange position (37) Moved to completely forward position (99) Unknown	35 34 36 37
54.	Seat Performance (this Occupant Position)  (0) Occupant not seated or no seat  (1) No seat performance failure(s)  (2) Seat adjusters failed  (3) Seat back folding locks or "seat back" failed  (specify):  (4) Seat track/anchors failed  (5) Deformed by impact of occupant  (6) Deformed by passenger compartment  intrusion, (specify):	
	(7) Combination of above (specify):  (8) Other (specify):  (9) Unknown	







	CHILD !	SAFET	Y SE	AT			
55.	Child Safety Seat Make/Model  (000) No child safety seat	58.	. Child	Safety	Seat Harne	ess Usage	00
	Applicable codes are found in your NASS CDS Data Collection, Coding and Editing (950) Built-in child safety seat	59.	. Child	Safety	Seat Shield	i Usage	00
	(997) Other make/model (specify):  (998) Unknown make/model	60.	. Child	Safety	Seat Tethe	r Usage	00
	(999) Unknown if child safety seat used		Varia	bles O	ns below ap A58-OA60. Id safety se		
56.	Type of Child Safety Seat (0) No child safety seat (1) Infant seat	-		After r		ness/Shield/Te ess/shield/teth	
	<ul> <li>(2) Toddler seat</li> <li>(3) Convertible seat</li> <li>(4) Booster seat - with shield</li> <li>(5) Booster seat - without shield</li> </ul>			After r	narket harn	ess/shield/teth used, but no a ner added	
	(7) Other type child safety seat (specify):		(09)	• • • • • • • • • • • • • • • • • • • •	wn if harnes or used	ss/shield/tethe	r
	(8) Unknown child safety seat type (9) Unknown if child safety seat used		(11)	Harnes		/Shield/Tether her not used her used	
57.	Child Safety Seat Orientation (00) No child safety seat	<u> </u>				ss/shield/tethe	•
	Designed for Rear Facing for This Age/Weight (01) Rear facing (02) Forward facing		(21) (22)	Harnes Harnes	ss/shield/tet ss/shield/tet	<i>Vith Harness/S</i> her not used her used ss/shield/tethe	
	(08) Other orientation (specify):  (09) Unknown orientation		(99)	Unkno	wn if child s	safety seat use	ed
	Designed For Forward Facing for This Age/Weight (11) Rear facing (12) Forward facing	r					
	(18) Other orientation (specify):  (19) Unknown orientation						
	Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight (21) Rear facing (22) Forward facing						£.
	(28) Other orientation (specify):						
	<ul><li>(29) Unknown orientation</li><li>(99) Unknown if child safety seat used</li></ul>						
	(00) Chilliown in Child Salety Seat used						

National Accident Sampling System-Crashworthiness Date	a System: Occupant Assessment Form Page
61. Injury Severity (Police Rating)  (0) O - No injury (1) C - Possible injury (2) B - Nonincapacitating injury (3) A - Incapacitating injury (4) K - Killed (5) U - Injury, severity unknown (6) Died prior to accident (9) Unknown  62. Treatment - Mortality (0) No treatment (1) Fatal (2) Fatal - ruled disease (specify):   Nonfatal (3) Hospitalization (4) Transported and released (5) Treatment at scene - nontransported (6) Treatment later (7) Treatment - other (specify):  (8) Transported to a medical facility-unknown if treated (9) Unknown	63. Type Of Medical Facility (for Initial Treatment)  (0) Not treated at a medical facility (1) Trauma center (2) Hospital (3) Medical clinic (4) Physician's office (5) Treatment later at medical facility (8) Other (specify):  (9) Unknown  64. Hospital Stay (00) Not Hospitalized  Code the number of days (up through 60) that the occupant stayed in hospital. (61) 61 days or more (99) Unknown  65. Working Days Lost  Code the number of days (up through 60) that the occupant lost from work due to the accident (00) No working days lost (61) 61 days or more (62) Fatally injured (97) Not working prior to accident (99) Unknown
VARIABL	DRK HERE ES 66-74
TO BE CODED BY	THE ZONE CENTER

### TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES	TRAUMA DATA
Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, n days = 30 + n up through 30 days = 60)  (00) Not fatal  (96) Fatal - ruled disease  (99) Unknown	71. Glasgow Coma Scale (GCS) Score (at Medical Facility) (00) Not injured (01) Injured - not treated at medical facility (02) No GCS Score at medical facility (03-15) Code the actual value of the initial GCS Score recorded at medical facility. (97) Injured, details unknown (99) Unknown if injured
67. 1st Medically Reported Cause of Death OO  68. 2nd Medically Reported Cause of Death OO  69. 3rd Medically Reported Cause of Death	72. Was the Occupant Given Blood? (1) No - blood not given (2) Yes - blood given (specify units): (9) Unknown if blood given
Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death (OO) Not fatal or no additional causes (96) Mode of death given but specific injuries are not linked to cause of death. (specify):	73. Arterial Blood Gases (ABG) – HCO <sub>3</sub> (00) Not injured  (01) Injured, ABGs not measured or reported  (02-50) Code the actual value of the HCO <sub>3</sub> (96) ABGs reported, HCO <sub>3</sub> unknown  (97) Injured, details unknown  (99) Unknown if injured
(97) Other result (includes fatal ruled disease) (specify):	PELT LICE DETERMINATION
(99) Unknown  70. Number of Recorded Injuries for This Occupant  Code the actual number of injuries recorded for this occupant.  (00) No recorded injuries  (97) Injured, details unknown  (99) Unknown if injured	74. Primary Source of Belt Use Determination (0) Not equipped/not available/destroyed or rendered inoperative (1) Vehicle inspection (2) Official injury data (3) Driver/occupant interview (8) Other (specify): (9) Unknown if belt used

## Appendix O:

NASS CDS OCCUPANT INJURY FORM:

VEHICLE #2 DRIVER



Administration

U.S. Department of Transportation National Highway Traffic Safety

**OCCUPANT INJURY FORM** 

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

3. Vehicle Number

02

2. Case Number - Stratum

9517

4. Occupant Number

01

#### **INJURY DATA**

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

		Source of Injury Data	Body Region	Type of Anatomic Structure	Anatomic	Level of	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
Abr	asion high	r <sub>5.</sub> 7	6. 8	7. <u>9</u>	8. <u>0</u> <u>2</u>	9. <u>0</u> 2	10/	11.0 1:	2. <u>0 0 4</u>	13.2	14. / 1	5. <u>0 0</u>
	2nd	16	17	18	19	20	21	22 23	3	24	25 2	6
	3rd	27	28	29 3	30	31	32	33 34	4	35 3	36 3	<sup>7.</sup> ——
	4th						·× -:	, 35 T . s	5		47. <u> </u>	
	5th 6th							* - *		_	58 > 59	
	7th								 	,-		1
	8th	82	83	<b>84</b> 8	, 95	86	87	88 89	·	90 9	91 92	2
	9th	93	94	95 9	6	97	98	99 100	)1	01 10	D <b>2</b> 103	B
	10th	104 1	05 1	06 10	<b>7</b> 1	108	109 1	110 111	1		3 114	4
1												

				occi	UPANT	INJURY	DATA				
	Source of Injury Data	Body Region	Type of Anatomic Structure	A.I.S 90 Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
11th			_			<del>_</del>			_	_	
12th	_	_	and and and and and and and and and and	<del></del>		_	_			<del>_</del> .	
13th		_	_			_	_			_	
14th	_					_	_			_	
15th	_	_	_				_			_	·
16th	<del></del> .					_	_			_	
17th		_	_			_			_	_	*
18th		_				_				_	
19th		_							_	_	<del></del>
20th			_			_	_				
21st		_				_				× 7	10.2
22nd			_			_			********	_	
23rd		_				_				_	
24th			_			_				_	
25th		_									

#### OCCUPANT INJURY CLASSIFICATION

## **Body Region**

- Head
- (2)Face
- (3) Neck
- (4)Thorax
- (5)Abdomen
- (6)Spine
- **Upper Extremity** (7)
- (8) Lower Extremity
- (9) Unspecified

#### Type of Anatomic Structure

- Whole Area (1)
- (2) Vessels
- (3)Nerves
- (4) Organs (includes Muscles/ligaments)
- (5) Skeletal (includes joints)
- (6)Head - LOC
- Skin (9)

#### Specific Anatomic Structure

Vessels, Nerves, Organs. Bones, Joints are assigned consecutive two digit numbers beginning with 02.

The exceptions to this rule apply to:

#### Whole Area

- (02) Skin Abrasion
- (04) Skin Contusion (06) Skin Laceration
- (08) Skin Avulsion
- (10) Amputation
- (20) Burn
- (30)Crush
- (40) Degloving
- (50)Injury - NFS
- (90)Trauma, other than mechanical

#### Head - LOC

(02) Length of LOC

- (04) Level
- (06) of
- (08) Consciousness
- (10) Concussion

#### <u>Spine</u>

- (02)Cervical
- (04)Thoracic
- (06) Lumbar

#### Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

#### **Abbreviated Injury Scale**

- (1)Minor Injury
- (2) Moderate Injury
- (3) Serious Injury
- (4)Severe Injury (5)
- Critical Injury Maximum (6)
- (untreatable)
- (7) Injured, unknown severity

#### **Aspect**

- Right (1)
- Left (2)
- Bilateral (3)Central
- (4)
- (5) Anterior **Posterior** (6)
- (7)Superior
- (8)Inferior
- (9) Unknown
- **(O)** Whole region

# **SOURCE OF INJURY DATA**

- OFFICIAL RECORDS (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

#### **UNOFFICIAL RECORDS**

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify):
- (9) Police

#### DIRECT/INDIRECT INJURY

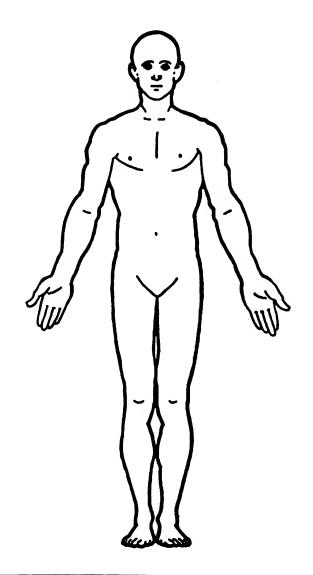
**INJURY SOURCE** 

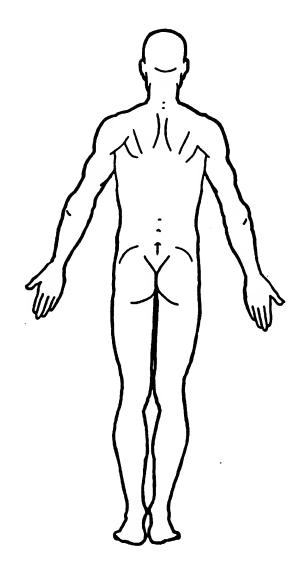
CONFIDENCE LEVEL

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

- Direct contact injury
- (2) Indirect contact injury
- (3)Noncontact injury
- Injured, unknown source

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)

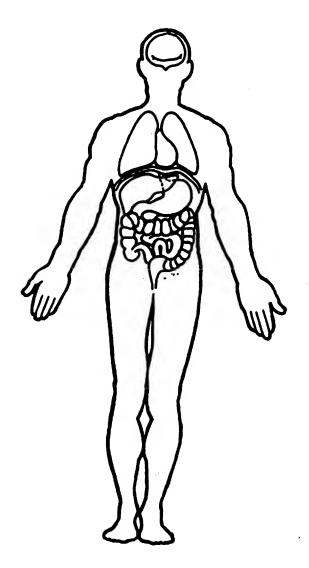


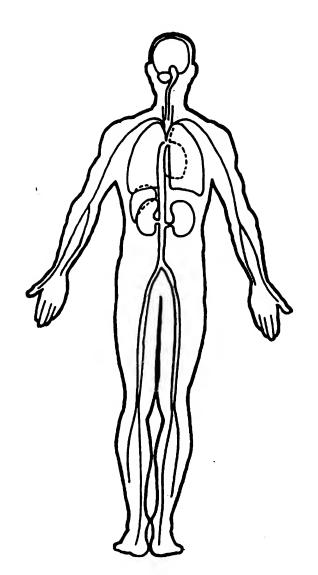


	OFFICIAL INJURY DATA — SKELETAL INJURIES
Restrained? No Yes	Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)
Blood Alcohol Level (mg/dl) BAL =	
Glasgow Coma Scale Score GCSS =	
Units of Blood Given Units =	
Arterial Blood Gases  pH = PO <sub>2</sub> =	
PCO <sub>3</sub>	

			INJURY	SOU	RCES		
FRON	T	(102)	Right aide hardware or	(183	Air bag-passenger side and	(411	) Wall mounted head rest
	Windshield	, , , ,	armrest		object held	,	(used behind wheel chair)
	Mirror	(103)	Right A (A1/A2)-pillar	(184	Air bag-passenger side and	(412	Other adaptive device
	Sunvisor		Right B-pillar	,,,,,,,	object in mouth	, , , , _	(apecify):
	Steering wheel rim		Other right pillar (specify):	(185)	Air bag compartment		tapacity).
	Steering wheel hub/spoke	(103)	Other right plant (specify).	(100)	cover-passenger side		
	Steering wheel (combination	(106)	Right side window glass	/186	Air bag compartment	EVT	ERIOR of OCCUPANT'S
	of codes 004 and 005)		Right side window frame	(100)	cover-passenger side and	VEH	
0071	Steering column,		Right aide window sill		eyewear		) Hood
	transmission selector lever,		Right side window glass	/197	Air beg compartment		
	other attachment	(103)		(107)	-	1432	Outside hardware (e.g.,
OORI	Cellular telephone or CB		including one or more of the		cover-passenger side and	450	Outside mirror, entenna)
	radio		following: frame, window aill, A (A1/A2)-pillar, B-pillar,	(199)	jewelry Air beg compartment	(455	Other exterior surface or
0091	Add on equipment (e.g.,		or roof side rail.	(100)	- ·		tiras (apecify):
000,	tape deck, air conditioner)	(110)			cover-passenger aide and		
010)	Left instrument panel and	(110)	Other right side object	/190	object held		
,	below		(specify):	(103)	Air bag compartment	(454)	Unknown exterior objects
1111	Center instrument panel and				cover-peasenger side and	EV#E	
, , ,	below	INTER	NOR	(100)	Other sis has (consider)		RIOR OF OTHER MOTOR
11 21	Right instrument panel and			(190)	Other air bag (apecify)	VEHI	_
, , 41	below		Seat, back support Belt restraint	1105.	Other sie has as	•	Front bumper
1121	Glove compartment door	(132)		(195)	Other air bag compartment		Hood edge
	Knee boister	(152)	Webbing/buckle		cover (specify)	(503)	Other front of vehicle
		(193)	Belt reatraint B-pillar or door			•	(apecify):
,13,	Windshield including one or	11541	frame attachment point				
	more of the following: front	(154)	Other restraint aystem	ROOF			Hood
	header, A (A1/A2)-pillar,		component (apecify):		Front header		Hood ornament
	instrument panel, mirror, or				Rear header		Windshield, roof rail, A-pilla
	steering assembly (driver		Head restraint system		Roof left side rail	(507)	Side surface
	side only)	(160)	Other occupanta (specify):		Roof right side rail		Side mirrors
116)	Windshield including one or			(205)	Roof or convertible top	(509)	Other side protrusions
	more of the following: front		Interior loose objects				(specify):
	header, A (A1/A2)-pillar,	(162)	Child safety seat (specify):	FLOOI	3		
	instrument panel, or mirror			(251)	Floor (including toe pan)	(510)	Rear surface
	(passenger side only)	(163)	Other interior object	(252)	Floor or console mounted	(511)	Undercarriage
017)	Windshield reinforced by		(apecify):		transmission lever, including	(512)	Tires and wheels
	exterior object (specify)				console	(513)	Other exterior of other
				(253)	Parking brake handle		motor vehicle (specify):
19)	Other front object (specify):	AIR BA	AG .	(254)	Foot controls including		
		(170)	Air bag-driver side		parking brake		
		(171)	Air bag-driver side and			(514)	Unknown exterior of other
FT S	DE	•	eyewear	REAR			motor vehicle
51)	Left side interior surface,	(172)	Air bag-driver side and	(301)	Backlight (rear window)		
•	excluding hardware or		jewelry	(302)	Backlight storege rack,	OTHE	R VEHICLE OR OBJECT IN
	ermrests	(173)	Air bag-driver side and		door, etc.		NVIRONMENT
52) (	Left side hardware or		object held	(303)	Other rear object (specify):		Ground
4	armrest	(174)	Air bag-driver side and	•		(598)	Other vehicle or object
53) I	Left A (A1/A2)-pillar		object in mouth				(apecify):
54) l	eft B-pillar	(175)	Air bag compartment	ADAPT	TVE (ASSISTIVE) DRIVING		
55) (	Other left pillar (specify):		cover-driver aide	EQUIP		(599)	Unknown vehicle or object
_		(176)	Air bag compartment	(401)	Hand controls for	,,,,,,	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
56) i	eft side window glass		cover-driver side and	•	braking/ecceleration	NONC	ONTACT INJURY
57) l	eft side window frame		eyewear	(402)	Steering control devices		Fire in vehicle
58) L	eft side window aill		Air bag compartment		(attached to OEM attending		Flying gless
	eft side window gless		cover-driver side and jewelry		wheel)		
	ncluding one or more of the		Air bag compartment	(403)	Steering knob attached to	(503)	Other noncontact injury
	ollowing: frame, window		cover-driver side and object		steering wheel		source (speciful)
	ill, A (A1/A2)-pillar, B-pillar,		held		_	16041	(specify):
	or roof side rail.		Air bag compartment		Replacement attering wheel		Air bag exhauat gases
	Other left side object		cover-driver side and object		(i.e., reduced diameter)	(03/)	Injured, unknown source
	specify):		in mouth		Joy stick steering controls		
,					Wheelchair tie-downs		
-			Air bag-passenger side		Modification to seat belts,		
SHT S	UDE		Air bag-passenger side and		(specify):		
_			eyewear Air bag pageages side and		Additional or relocated		
,,, п	light side interior surface, xcluding hardware or		Air bag-passenger side and		switches, (specify):		
			je welry				
•	rmrests				Raised roof		

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)





ICD-9*CM  Specimen Test Type  Blood and urine tests Blood test only Urine test only Other test Unspecified  A Autopy—nedical information based upon a incurrence of the patient is based on a non-invasive examination of the body ME Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body ME Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body ME Admission/industry are particle in the information in the record about the considered as post-PR stoce it summarizes the patient's admission; these records are common in short hospitalizations and ureally only constain: educision DX(s), final DX(s), and a little of surplical transments; ICD-9-Mocdos are frequently available.  ME Admission/discharge face shoet—face sheets are examelably the same as admission record/summaries and constain the same types of information as discussed abserve DB Discharge summary—shorten history of a patient's hospitalization is highlighting the patient's nation injuries; this record is often written from the perspective of its authors which in many cases is a consultant Oct.  CB Consultation record—tasken after the patient has been admitted, or while in surgery or intensive care TX Radiographic records—tasken after the patient's admission that the surgery or intensive care TY Patient progress note—emplemental record constaining additional auternation that surgery can be patient the surgery can be patient to a married at the energetory room Type of the patient upon a rarried at the energetory room report to TX Radiographic records—tasken after the patient's admission TY Patient progress note—emplemental record containing additional nature and patient as a married and the results of the physical exame nectors whose experience was recognized by the employment of the energency room report to TX Radiographic records—tasken after the patient size in the energency room report to TX Radiographic records—tasken after t		CAUSE OF DEATH	
Specimen Test Type  Blood and urine tests Blood test only Urine test only Other test Unspecified  MEDICAL RECORD ABBREVIATIONS  Symbol  Record Type Description  A Autopsy-medical information based upon an invasive examination of a body Medical examiner's record-where the information reproduced in the patient's administory and patient and a single of surject it restored to the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's administory for the patient's patient in the patient's administory for the patient's patient in the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant Operative record-summary of a performed angical operation sheep providing detailed information as discussed above Discharge summary-aborter history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant Operative record-summary of a performed angical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally administed; thus, this record is necessal from an outspicial entury. The patient is a emergency-room related results from an outspicial outpury, these treat it as emergency-room related results from an outspicial entury of patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patients and patie			
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Specimen Test Type  Blood and urine tests Blood test only Urine test only Other test Unspecified  MEDICAL RECORD ABBREVIATIONS  Symbol  Record Type Description  A Autopay—medical information based upon an invasive examination of a body Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body AR Admission record/summary—may medical information on this record should be considered as post-RR since it summarizes the patient's administor, these records are common in short bongstilizations and unsulty only contain: administor DNA, final DNA(s), and a listing of surgical treatments; ICD-5-CM codes are frequently available.  PS Admission/discharg faces sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above  Discharge summary—shorten history of a patient's hospitalization and unsulty only contain: administor DNA(s), final DNA(s), and a listing of surgical treatments; ICD-5-CM codes are frequently available.  Operative record-summary of a performed are researched by easier as an admission record/summaries and contain the same types of information as discussed above  Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a committen.  Operative record-summary of a performed surgical operation of the property of the patient's major injuries; this record is often written from the perspective of its author which in many cases is a committed.  PX Rediographic record-staken after the patient's major injuries; the record or results from an outspicial enterpret, one treat it as emergency—roon related.  PX Rediographic record-staken after the patient has been admitted, or while in surgery or intensive care  PX Rediographic record-staken after the patient is undefined.  PX Rediographic record-staken after the patient is undefined  PX Rediographic reco	ii.		
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has the title of a coroner	CR Coroner's report-med		a person who is not a doctor but who
ET Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)  O Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)			

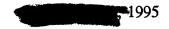
#### TRANSPORTATION RESEARCH CENTER

Indiana University
Bloomington, Indiana 47403-1599

# ON-SITE AIR BAG INVESTIGATION SELECTED PHOTOGRAPHS

CASE NO. - 95-17
FLEET - LEASED VEHICLE
LOCATION TEXAS
ACCIDENT DATE
1995

A total of eighty color copies of photographs are presented and referenced as Photograph #01 through Photograph #80. Photographs numbered #29, #34, #52, #53, and #54 were taken and made available by the Case Vehicle Owner's Engineering Firm. The remainder of these photographs were taken by the Transportation Research Center; NOTE: the case vehicle's driver and right front passenger air bags had been removed prior to this contractor's inspection of the vehicle.



Contract Number: DTNH22-94-D-17058

#### Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
National Center for Statistics and Analysis
Washington, D.C. 20590



# 01 -- Case Vehicle's westward travel path in inside through lane approximately 50 meters (165 feet) east of impact



# 02 -- Case Vehicle's westward travel path in inside through lane approximately 30 meters (99 feet) east of impact



# 03 - Case Vehicle's westward travel path in inside through lane approximately 15 meters (50 feet) east of impact



# 04 - Case Vehicle's westward travel path in inside through lane approximately 3 meters (10 feet) east of impact



# 05 -- Eastward view of Case Vehicle's westward travel path in inside through lane from area of impact in intersection



# 06 - Vehicle #2's southward travel path in southbound lane approximately 50 meters (165 feet) north of impact



# 07 -- Vehicle #2's southward travel path in southbound lane approximately 20 meters (66 feet) north of impact



# 08 -- Vehicle #2's southward travel path in southbound lane approximately 3 meters (10 feet) north of impact



# 09 -- Vehicle #2's southward travel path in southbound lane just prior to impact



# 10 - Vehicle #2's southwestward post-impact path of travel; NOTE: final rest position was near center median facing east-southeast



# 11 -- Vehicle #2's final rest position near center of median heading east-southeast; NOTE: vehicle rotated counterclockwise from impact to rest



# 12 -- Northeast view from vehicle #2's final rest position of southward travel path and glass debris near median most likely from driver's window



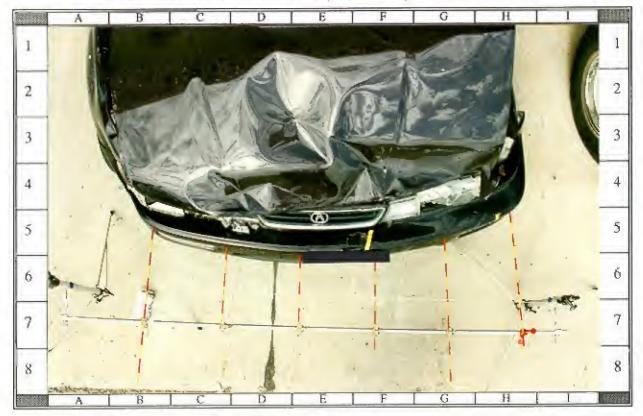
# 13 -- Case Vehicle's damaged front without contour gauge; NOTE: direct damage is essentially across entire front



# 14 -- Case Vehicle's damaged front with contour gauge present; NOTE: slight shift of front end to left (toward right edge of photo)



# 15 -- Close-up of direct damage to Case Vehicle's front left bumper; NOTE: Vehicle #2's left front wheel rim mark (cell G6--G7)



# 16 -- Overhead view of frontal crush to Case Vehicle with contour gauge present; NOTE: maximum crush occurs @ C<sub>1</sub> (see cell H5)



# 17 -- Case Vehicle's damaged front end viewed from approximately 45 degrees left of front with contour gauge present



# 18 -- Reference line view of Case Vehicle's left side from front showing front left corner damage and slight leftward end shift



# 19 -- Reference line view of Case Vehicle's front damage from left with contour gauge present showing crush measurements



# 20 -- Case Vehicle's undamaged left side and left rear viewed from approximately 45 degrees left of back



# 21 -- Case Vehicle's undamaged back viewed from approximately 45 degrees left of back



# 22 -- Reference line view of Case Vehicle's undamaged back from right also showing undamaged right rear



# 23 -- Case Vehicle's holed right windshield; NOTE: windshield holed from right front passenger's head contact



# 24 -- Close-up view of Case Vehicle's holed right windshield; NOTE: windshield holed from right front passenger's head contact



# 25 -- Reference line view of Case Vehicle's front damage from right with contour gauge present showing right front corner damage



# 26 -- Reference line view of Case Vehicle's right side from front showing front right corner damage and slight leftward end shift



# 27 -- Case Vehicle's damaged front viewed from approximately 45 degrees right of front; NOTE: induced damage to right fender and holed windshield



# 28 -- Close-up of direct damage to Case Vehicle's front right bumper with contour gauge present



# 29 -- Case Vehicle's front seating areas viewed from left showing deployed driver and right front passenger air bags



# 30 -- Interior surface of Case Vehicle's driver door and dash contacted by driver's left knee; NOTE: air bag removed from steering column hub



#31 - Close-up of Case Vehicle's left dash, instrument panel, and steering wheel hub; NOTE: removed driver's air bag



# 32 -- Case Vehicle's driver seating area, center dash and console, header, and rearview mirror viewed from center rear seat; NOTE: removed air bag



# 33 -- Case Vehicle's undeformed steering wheel rim viewed from right; NOTE: no evidence of contact to driver's door surface or left A-pillar



# 34 -- Case Vehicle's front seating areas viewed from left showing deployed driver and right front passenger air bags



# 35 -- Case Vehicle's front dash and seating area; NOTE: right dash contacts, adjustable shoulder restraint, and removed right front air bag module



# 36 -- Case Vehicle's contacted right front knee bolster and glovebox; NOTE: yellow tape indicates contact areas



# 37 -- Close-up of contact scuffs to Case Vehicle's removed glovebox door



# 38 -- Case Vehicle's holed windshield on right, noncontacted right A-pillar, contacted knee bolster and glovebox, and removed right front air bag module



# 39 - Close-up of Case Vehicle's holed right windshield; windshield holed by right front passenger's head



# 40 -- Case Vehicle's rear seating area showing obvious contacts to right front seatback; NOTE: driver claims rear passenger was seated in position "21"



# 41 -- Case Vehicle's rear seating area from right; NOTE: outboard three-point belts and adjustable head restraints



# 42 -- Case Vehicle's rear seating area from left showing seatback knee contacts; NOTE: lack of space behind driver's seat--position "21" (see Photo #40)



# 43 -- Case Vehicle's removed driver air bag with lipstick transfer ("P") from driver



# 44 -- Case Vehicle's removed driver air bag and top cover flap; NOTE: no evidence of contact found



# 45 -- Case Vehicle's removed driver air bag and bottom cover flap; NOTE: no evidence of contact found



# 46 -- Case Vehicle's removed driver air bag and inflator module viewed from behind



# 47 -- Case Vehicle's removed right front air bag showing four cuts in bag material ("M","H","N", and "E") most likely from windshield glass



# 48 -- Closer-up of Case Vehicle's removed right front air bag showing cuts in material ("E" and "H"); NOTE: tear in bag at bottom of photograph



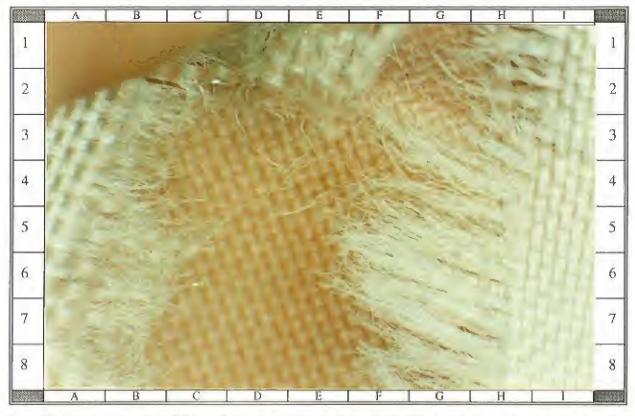
# 49 -- Case Vehicle's torn right front air bag; NOTE: tear located in bottom portion of air bag along fold lines



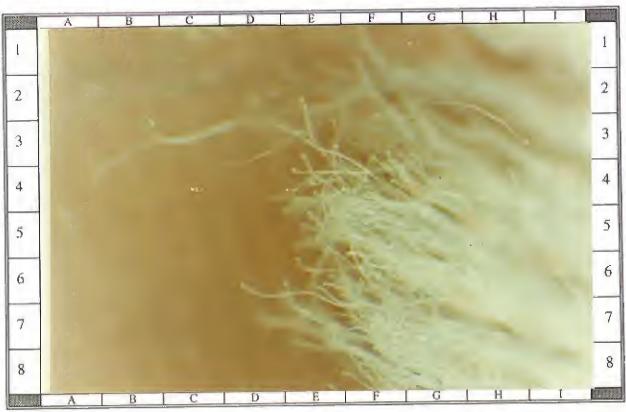
# 50 -- Case Vehicle's torn right front air bag showing length to be approximately 34 centimeters (13.4 inches)



# 51 -- Case Vehicle's torn right front air bag showing close proximity to inflator module



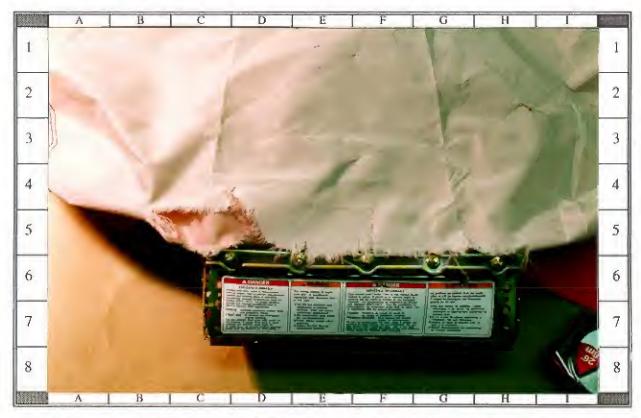
# 52 -- Close-up of fibers from Case Vehicle's torn right front air bag showing singeing



# 53 -- Microscopic close-up of mushroomed (singed) fibers from Case Vehicle's torn right front air bag



# 54 -- Closer microscopic view of mushroomed (singed) fiber ends from Case Vehicle's torn right front air bag



# 55 -- Case Vehicle's torn right front air bag shown next to the inflator; inflator module mounting screws caused tear



# 56 -- Case Vehicle's torn right front air bag showing that the tear marks originated from the screws on inflator module



# 57 -- Case Vehicle's torn right front air bag showing that the origins of the tear occurred along the folding pattern lines



# 58 -- Case Vehicle's right front air bag viewed from top; NOTE: no evidence of contact to top cover flap and no cuts or tears



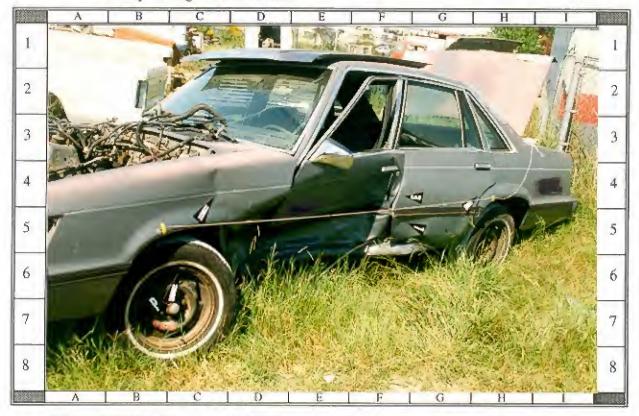
#59 -- Case Vehicle's right front air bag showing 9 centimeter (3.5 inch) vent holes



# 60 -- Case Vehicle's removed right front air bag inflator components



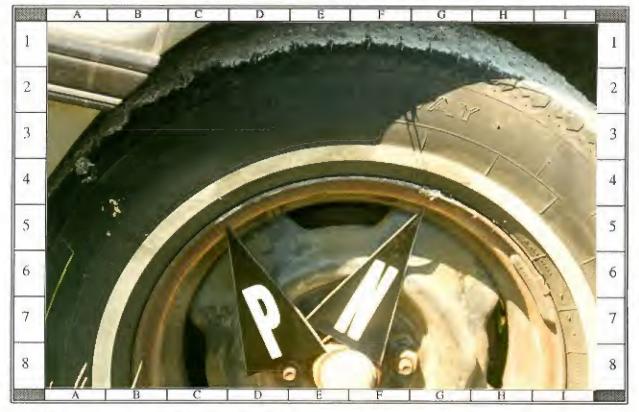
# 61 — Vehicle #2's undamaged front and damaged left side viewed from approximately 30 degrees left of front



# 62 -- Vehicle #2's damaged left side with stringline present viewed from approximately 45 degrees left of front



# 63 - Direct damage to Vehicle #2's left front wheel rim ("N" and "P") and fender ("H") begins 17 centimeters (6.7 inches) behind axle



# 64 -- Close-up of Vehicle #2's direct damage to left front wheel rim; NOTE: scraping to rim between "P" and "N"



# 65 -- Vehicle #2's damaged left side; NOTE: direct damage goes from left front wheel rim ("P" and "N") rearward to B-pillar ("E" and "L")



# 66 -- Close-up of Vehicle #2's area of maximum crush @ C<sub>4</sub> (see cells G5--G6); NOTE: tape on stringline represents location of crush measurements



# 67 -- Vehicle #2's damaged left side viewed from approximately 60 degrees left of back; NOTE: marker "N" @ left rear door shows spurious damage area



# 68 -- Close-up of Vehicle #2's spurious damage to left rear door area, possibly occurring in salvage yard



# 69 - Vehicle #2's damaged left side viewed from approximately 45 degrees left of back



# 70 -- Reference line view of Vehicle #2's damaged left side from back showing crush profile



#71 - Reference line view of Vehicle #2's damaged left side from front showing crush profile



# 72 - Vehicle #2's undamaged back and right side viewed from approximately 60 degrees right of back; NOTE: back parts removed for salvage



# 73 -- Vehicle #2's undamaged right and front viewed from approximately 45 degrees right of front



# 74 -- Vehicle #2's driver seating area, instrument panel, and dash view from outside driver window; NOTE: intrusion to driver's dash (see cells A3--B4)



# 75 -- Close-up of Vehicle #2's driver seating area showing lack of contact evidence; NOTE: lower door panel intrusion



# 76 -- Vehicle #2's driver and right front passenger seating area viewed from outside right front door



# 77 -- Vehicle #2's rear passenger seating area viewed from outside right rear door; NOTE: intrusion to left lower B-pillar and door panel



# 78 -- Close-up of Vehicle #2's left rear passenger door intrusion and deformed arm rest on door



# 79 -- Close-up of intrusion to Vehicle #2's left B-pillar



#80 -- Close-up view of intrusion to Vehicle #2's driver door panel, left dash, and left kick panel

Vehicle #2: 1985 Ford LTD, Four-door Sedan